Why Now?

(From Musclehead to Mature[-ish] Adult)

Some days I just love the gym. I love the heavy iron. I love the sense of satisfaction that comes with knowing I just lifted something I hadn't been able to lift before. Some days, if it were up to me, I'd spend all day there.

When I was younger, I did spend all my time there. Now however, my wife and my bank account would take offense at that practice. And honestly, there seems to be more to life than just lifting heavy stuff—though some days, not much. Now I run a personal training business and train clients for approximately 30 sessions per week. I currently train myself around my family schedule for maybe 4 hours per week.

Things weren't always that way. In the recent past, I had seen clients up to 65 hours per week in one-on-one personal training sessions and tried to run several businesses on top of that. In fact, over the course of my career, I've racked up over 18,000 hours of one-on-one personal training sessions. It's hard to believe when I look back at it. I'd train myself late at night after working a 12- to 15-hour day.

When I was a kid, it seemed as if I had all the time in the world—no responsibilities other than take out the trash, get my homework done, and a few other menial chores. So, I could spend time in the gym—lots of time. Two-plus hours per workout were common. (This is true of anyone who's getting started and laden with the two Ts: testosterone and time.) So at age 16, 20 years ago, after breaking my arm wrestling, I headed to the gym to get stronger and prepare for winning the next year's season. Getting bigger was par for the course, because the two went hand in hand.

By the end of the summer, I had gained almost 15 lbs of muscle by following the guidance of the older guys in the gym and the occasional *Muscle and Fitness*. (This without even working my legs. That's what running is for, right?). I wrestled a semester my freshman year in college and quit for a variety of reasons. One of them was that I fell in love with the iron.

By the time I went home for Christmas my senior year of college, I had a subscription to *Powerlifting USA* and had ballooned from 165 lbs to 252 lbs by eating anything that wasn't nailed down, lifting as much tonnage as possible, and living the luxurious life of a college student—sleeping 10 hours a night and occasionally going to class. All my shirts were XXL, and I had shoulders the size of cantaloupes. I was relatively strong, too—not as strong as my idols in *Powerlifting USA* but strong enough.

At age 19, I benched 390 lbs weighing 216 lbs in a WNPF Bench Press Meet. I had stiff-legged deadlifted 500 lbs off a five-inch box. I routinely performed power shrugs with 800-plus lbs and even shrugged 1,000 lbs. I routinely performed 5x5 with 225 lbs on the seated military press. I hang-cleaned 315 lbs for a set of five and two sets of four. My squats, however, never measured up to the rest of my lifts, because I dislocated my right patella wrestling my senior year of high school and was always dealing with chronic knee pain. But postcollege, after I started Olympic lifting, I worked up to a 5x5 with 405 lbs (Olympic squats)—no warm-up, no belt, and two minutes of rest between sets weighing approximately 210 lbs. I also squatted 500 lbs with no belt and 415 lbs for 13 reps with a belt at the end of a training session as the culmination of a preexhaust workout.

Postcollege, I could no longer support my eating habits (bye-bye dining hall and unlimited chow), and my joints and cardiovascular system could no longer support 250-plus lbs. So I started dieting down.

While in Ukraine during the summer of 1994, I trained with some Olympic lifters and, after some deliberation, switched from powerlifting (which I felt I never would be any good at) to Olympic-style weightlifting. (This also aided in the dieting. Food was scarce in the post-Soviet Ukraine, even in spite of the 100 cans of tuna that I brought with me.) The guys I trained with in Ukraine were strong—freaky strong! I watched a 60 kg lifter strip down from his street clothes to his skivvies and snatch 120 kg with no warm-up! He missed it behind him, but still—double bodyweight snatch with no warm-up!

Once I got into Olympic lifting, it was, to some degree, as if I had never trained before—at least not my legs. Gone were the once-a-week squat workouts with luxurious rest intervals between sets. Instead, I had two-minute rest periods and squat workouts three times per week *after* snatches and/or cleans. Add to that heavy pulls and heavy overhead work three times per week. You have a radically different training system with radically different results. You also have a back of iron and legs of steel.

In 1999, I won a New Jersey State Championship at 105 kg, and in 2000, my numbers were good enough to qualify me for the National Championships in the same weight category. In the meantime, my love for the iron had me working in gyms as a personal trainer first in New Jersey and then in New York City, finally landing me my dream job: Division I strength and conditioning coach. This allowed me to truly be in the gym all day *and* get paid to do so. SWEEEETTT!!!

Why do I share all of this with you? Because this is the life of a Musclehead. In this ideal world, it's easy to get strong and get big. You can train on your breaks, and you get paid to do so. Your

entire world revolves around your workouts/training sessions, from what you eat and how much, to what time you go to bed, and whether you can find a gym suitable to your needs at your vacation destination.

Very few people are Muscleheads. This presents a major training disconnect: Muscleheads write programs for normal people assuming and using Musclehead Methodology. Their programs are based on their experiences of living in a gym in their ideal world. So their programs, which you've seen the likes of in all of what I call the "fitness tabloids" (the bodybuilding magazines on the newsstands), don't work for Joe or Jane Average. Joe and Jane don't have two hours per day, four or five days a week to train like a Musclehead. Nor do they want to. They want to work as little as possible and get maximal results. (Don't we all!) There must be a better way. And there is:

Muscle-building, time-efficient kettlebell training

So then, why am I writing a book about gaining muscle using kettlebells when admittedly, other tools are available and I used them to gain most of my muscle mass? Several reasons, really:

1. You're not a Musclehead (at least not anymore).
2. I like kettlebells—a lot.
3. I like muscle—a lot.
4. Science supports gaining extra muscle for increasing strength.
5. I don't have as much time to train as I'd like, and my clients don't either.

You're Not a Musclehead

We've already been over this, but you have better things to do than use Musclehead Methodology to get big and strong. Perhaps you have a family, a job, or even both. And you want to keep them. You need a program, a method that allows you to accomplish the results you want in as little time as possible.

I Like Kettlebells

You probably do, too, since you're reading this book. Personally, I think kettlebells are just fun to use and remind me of the barbell variations of the Olympic lifts. But let's face it: The unique shape of the kettlebell makes it far superior to dumbbells and barbells for recruiting more muscles in the same exercises.

Just compare the dumbbell press with the kettlebell press—case in point. Tell me they are the same, and I'll tell you you're not paying attention. Not only that, but there are several exercises that literally change when performing the kettlebell variations, such as the snatch and the clean. Their trajectories change, or at least have the ability to, and make the exercise more difficult and more beneficial. Finally, there are exercises you just can't perform at all or well with barbells or dumbbells—the swing, for example.

I Like Muscle

As I already mentioned, this started for me when I was wrestling in high school. Muscle symbolized strength. And at that time in my limited exposure to the Iron Game, a guy with bigger muscles equaled a stronger guy. I wanted to be a better wrestler, and I equated that with two things—better wrestling technique and greater strength (more muscle). And let's also face the practicality of having lots of muscle that no one wants to talk about: The more muscle you have, the higher metabolism you potentially have, so the more food you can eat and enjoy! This means you don't necessarily have to work your butt off to maintain or lose fat. Your muscle maintains and burns it for you!

Science Supports Growing Muscle to Gain Strength

To quote V. M. Zatsiorsky, arguably one of the world's foremost sports scientists, from his book *Science and Practice of Strength Training*, "The capacity of a muscle to produce force depends on its physiological cross-sectional area, and particularly on the number of muscle fibers in the muscle and the cross-sectional areas of the fibers" (p. 62). In other words, the bigger the muscle, the more potential that muscle has to be stronger. Zatsiorsky goes on to recommend, "In sports in which absolute strength is the main requirement, athletes should train in a manner that stimulates lean muscle gain" (p. 70). Therefore, if you want to become stronger, you would be well served to intentionally grow some muscle.

Limited Time to Train

Let's face it: When you're a kid, time seems to be endless. When you're an adult, you never seem to have enough of it. That seems to be the biggest excuse for any sort of shortcoming or personal failure—"I don't have the time!" The training routines of yesteryear and the training routines of the "pros" seem like science fiction at best and trashy romance novels at worst. (For the record, I've *never* read a trashy romance novel.) I don't know about you, but I don't have 1½ to 2 hours a day to train using the Musclehead Methodology of my college years. My responsibilities won't allow it. Not only that, I'm past the point in life where I want to do that. I want to enjoy all that life has to offer, and perhaps you do, too.

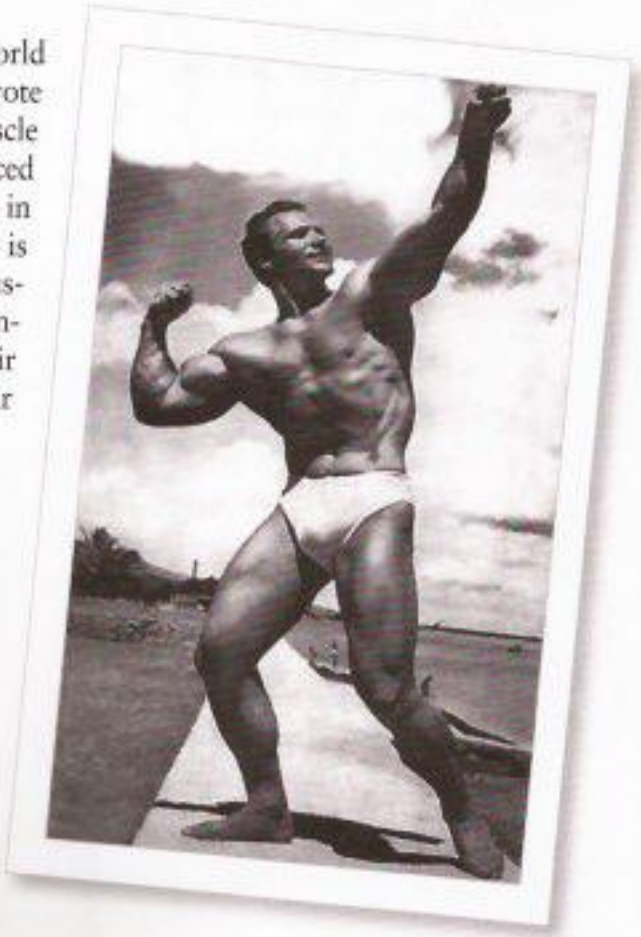
This book, *Kettlebell Muscle*, will show you how we're going to build muscle using kettlebells—arguably the most time-efficient training tool on the planet.

But first, we must repair the damage done by Muscleheads to the Iron Game.

The Quest for Muscle:

A Manly Pursuit or the Height of Narcissism?

In the kettlebell world, or at least the RKC world of kettlebells, it seems less than manly to devote an entire training program to building muscle. Muscle should be a by-product of an intelligently produced and organized strength training program, not an end in and of itself. The extreme version of this is that it is somehow unmanly to train for the acquisition of muscle. I can only surmise this is because of the gargantuan Muscleheads who abuse steroids, shave their bodies, and pose oiled up to music on a stage in their fancy underpants. I don't know—I could be wrong.

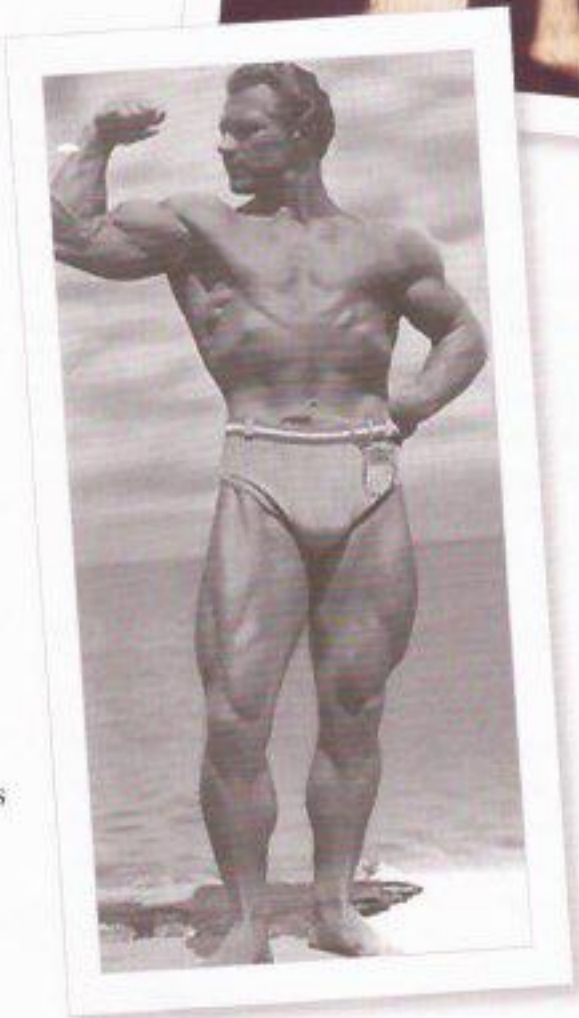


Anyway, take a look at these pictures:

Sure, this guy was pretty, but he was also pretty strong.

These photos are of John Grimek, a legend in the Iron Game, and he was not just as strong as he looked—he was *stronger.* Here's a list of statistics about him, including just some of his *strength* accomplishments:

- Height, 5'8"
- Weight, 190–230 lbs; best shape, 210 lbs
- 1936 American Senior National Weightlifting Champion (736 lbs total)
- 1936 Olympic Games, 8th place in Weightlifting, Heavyweight Division
- 1938 Weightlifting World Championships, 4th place
- 1939 York (Barbell) Perfect Man
- 1940 Mr. America
- 1941 Mr. America
- 1946 Most Muscular Man in America
- 1948 Mr. Universe
- 1949 Mr. USA
- Strict press, 285 lbs; Loose press (with backbend), 364 lbs
- Jerk, 400 lbs
- Deadlift (without warm-up), 600 lbs
- Bent press, near 300 lbs
- Side press, 300 lbs
- Bench press, 480 lbs
- Alternating dumbbell (military) press, 2 x 140 lbs for multiple reps
- One-hand swing a loaded dumbbell, 230-plus lbs
- Strict curls, in excess of 200 lbs
- Overhead support, 800-plus lbs
- Straddle lift (a sort of squat/DL combo), 1000-plus lbs
- Squatting well over 600 lbs when in his 70s
- Upper-arm measurements, over 19"
- Routinely performed the full splits



As you can see, John Grimek's accomplishments are more than impressive. How many strength athletes, let alone bodybuilders, let alone men who weigh in the low 200s, can perform these feats today? Few, if any. What makes this even more remarkable is that this was the presteroid era!

So, what can we learn from John Grimek? It's possible to be incredibly muscular and incredibly strong without looking like today's bloated puffy, immovable bodybuilders. Like John Grimek, you can train for size, have usable strength, and still be manly.

Maximum Muscle or Super Strength: Why Not Both?

There are essentially two ways to train for strength. One is to grow some muscle, and the other is to rely on motor learning. What is the trainee to do? Why not both?

Pavel revolutionized the strength training world in 1999 with his masterpiece, *Power to the People*. In it, he introduced a novel way to get strong(er) without focusing on gaining muscle first. This was based on skill training, a motor learning concept, or achieving greater neurological efficiency.

What's wrong with this method? Nothing. However, we still cannot discount Professor Zatsiorsky's assertion that to get stronger, we must grow muscle (i.e., get bigger). Therefore, we must reconcile the two.

How do we do that? By categorizing our strengths. *Power to the People* will increase your relative strength—that is, your strength relative to your bodyweight. The lighter you are, the greater the potential for high levels of *relative strength*. In fact, some of the greatest weightlifters in the world have incredibly high levels of relative strength. A good example is three-time Olympic Gold Medalist Naim Suleymoneglou, who at a bodyweight of 132 lbs, clean and jerked 407 lbs, over three times his bodyweight! Contrast this feat with the greatest load ever clean and jerked, 586 lbs, by Leonid Taranenko, at a bodyweight of around 300 lbs—not even double bodyweight. However, the heavier you are, the greater your potential for *absolute strength*, or the greatest amount lifted. Strongman Bud Jeffries, who weighs in the mid-300s, can bottoms-up squat 1,000 lbs without any supportive gear other than a belt.

So, why not train for both strength and muscular growth? Why not have the best of both worlds? Here's why: Remember Professor Zatsiorsky's recommendations? If you're training for absolute strength, you need to grow some muscle to help you get there. Once you have your newly acquired muscle, you can make it as efficient as possible through improved rate coding, motor unit synchronization, and other fancy terms like that—essentially by just "greasing the groove," as Pavel has written about.

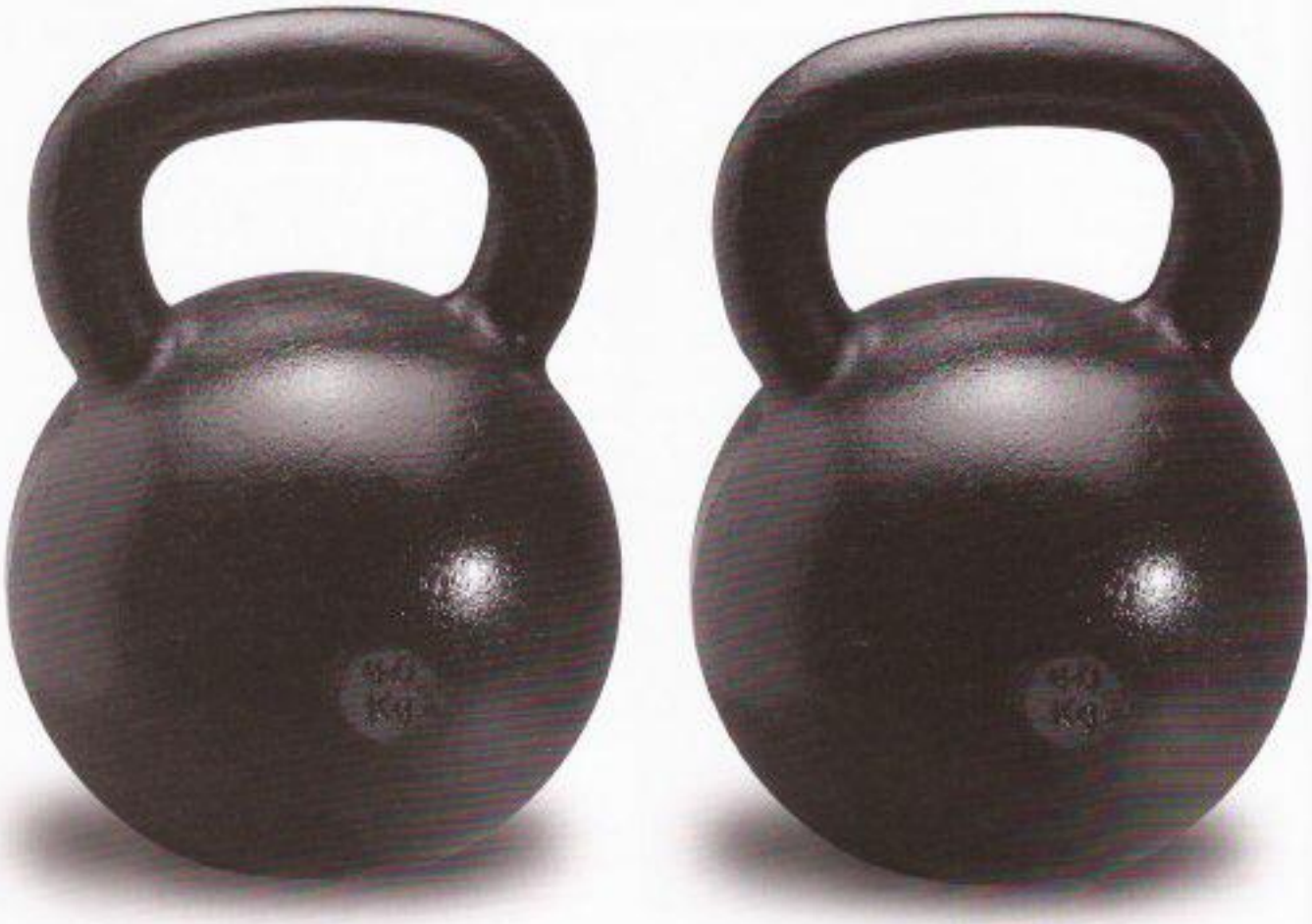
Most trainees only become so neurologically efficient before they need to put on more muscle. (The others go on to dominate sports like weightlifting and powerlifting in the lower- and middleweight categories.) And so the cycle continues: improve neurological efficiency, max out said effi-

ciency at given bodyweight, pack on more muscle, and repeat the cycle. At least that's one way to look at it. Some care nothing for gaining muscle and focus purely on acquiring strength. That's not a bad thing per se, but it does have one drawback. If you take time off from training, it's not the loss of muscle at first but the loss of neurological efficiency. In fact, one study suggests that muscle mass doesn't decrease or even change during a two-week layoff only neurological efficiency.[1]

So, cover all your bases. Train to enlarge your muscles and build a bigger strength platform. Then, get as strong as possible by learning how to maximize your muscular recruitment. Keep repeating this process until you've reached your desired outcome.

What about those who don't want to gain any extra muscle mass but just want to get stronger? Tough! Just eat less!

1. Deschenes MR, Giles JA, McCoy RW, Volek JS, Gomez AL, & Kraemer WJ. (2002, Feb.). Neural factors account for strength decrements observed after short term muscle unloading. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 282(2): R578–583.



How Do You Gain Muscle Using Kettlebells?

Whether you're trying to gain strength or gain muscle, the only way to accomplish either goal is by respecting the overload principle. Simply put, you must do more than you've done previously to make progress. With traditional weight training, most trainees use just one mechanism: adding weight to the bar. However, using a fixed weight, such as a kettlebell, you must be more creative.

The best way to increase muscle is to increase the tension placed on the muscle. There are three ways to increase tension on the muscle using kettlebells:

1. Increase speed of loading
2. Increase duration of loading
3. Increase density of loading

Increase Speed of Loading

Kettlebells are unique because of the nature of their ballistic exercises, such as the swing, clean, and snatch. Newton's third law states that for every action, there is an equal and opposite reaction. Therefore, the harder you accelerate a ballistic exercise on the backswing, the further your hips and hamstrings will stretch. This means that they will contract harder on the upswing, recruiting more of the fast-twitch muscle fibers, or the fibers that we really want to recruit to build high-quality, dense muscle.

In this program, we use double kettlebell ballistics—twice the load theoretically, twice the acceleration on the both the front end and the back end of the swing, providing twice the results. Of course, it never works out as neatly as that, but you see where I'm going with this concept.

Not So Quick, HIT-Jedi

There is still a pervasive myth in the strength training world that a fast lifting tempo relies on momentum and therefore reduces intramuscular tension. It started in the 1970s with Arthur Jones of Nautilus and HIT fame. Then it experienced resurgence in the mid-1990s with so-called prescribed tempos, written in such ways as 4-0-2 and so on, by two competing strength coaches who trained Olympians and also ascribed to themselves the moniker "World's Greatest Strength Coach."

I almost fell for the trap until I asked my weightlifting coach, Alfonso Duran, about it. A simple demonstration was all I needed to dispel the confusion and assure me I was on the right path. Alfonso stood on a scale and had me watch the dial as he held a dumbbell in his hand and moved it in a slow, controlled manner. The dial didn't move. Then he moved the dumbbell as fast as he could back and forth. The dial jumped all over the place! What was going on?

This simple demonstration showed that an increase in acceleration with the same mass increases the production of force:

Force = Mass x Acceleration

Too many people forget that acceleration is necessary to produce intramuscular tension and that intramuscular tension in necessary to create protein degradation, which is necessary to initiate protein synthesis—muscle building. However, that being said, this *does not* give us carte blanche to use sloppy form on our exercises—far from it. The advanced trainee can move—that is, accelerate—a load both on the concentric *and* eccentric portions of a lift, because he or she has mastered—or at least come as close as possible to mastering—that particular movement.

What's the point? Accelerate your weights and increase your force production and therefore your muscle mass.

Increase Density of Loading

Density can be defined simply as the amount of work performed in a given time. To overload the body, we must do the same amount of work we normally do but in less time—or even more work in the same time. For example, let's say our trainee can perform clean and presses for 5x5 on each hand with a 32 kg in 20 minutes. To increase the loading density, our trainee would strive to do the same 5x5 in less than 20 minutes—let's say 19 minutes. To keep progressing, our trainee would have to keep performing the same amount of work ([32 kg/5+5] x 5) in less time each training session.

Compounding the Matter

As kettlebell trainees, we reject standard bodybuilding dogma regarding isolation of any specific muscle group. Instead, we embrace the functionality of muscle groups through training the entire body, with special emphasis on movements and exercises. We embrace compound exercises as our weapons of choice to force change upon our bodies.

Compound exercises, such as the swing and the press, are exercises that use multiple muscle groups and cross more than one joint through a given movement or exercise. These are entry-level exercises and very good for building muscle.

But with fixed weights such as kettlebells, we can and must do better if we expect to adhere to the overload principle.

Compound Lifts

Compound lifts are two or more compound exercises placed together to form one exercise. Examples are the clean and press and the clean and jerk. Compound lifts are not limited to the Olympic lifts and their variations: As long as an exercise is categorized as a compound—meaning that it crosses more than one joint and working more than one muscle group—it can be included in a compound lift. An example is the front squat and press.

We'll be using two types of compound lifts: complexes and chains, both of which have their unique differences. We'll discuss each of them in detail later on. In the meantime, let's review the benefits of compound exercises and compound lifts.

For increased strength, resisted metabolic conditioning, and even fat loss, research and experience already tell us that compound exercises can't be beat. Here's a quick review of the top three benefits:

1. Recruit more muscle fibers per unit of time than isolation exercises, which produces greater systemic and localized strength gains.

2. Stimulate sex hormones and therefore elicit a greater anabolic response both intra- and postexercise, which produces greater potential muscle growth.

3. Cost more energy to perform, which means a greater number of calories are expended intra- and postexercise compared to isolation exercises.

In a perfect world, we'd have all the time we need to focus on these exercises with plenty of required rest, the perfect frequency, and adequate nutrition to make the best and fastest progress limited only by our dreams.

However, we don't live in a perfect world. Time constrains us on every side and in every area of our lives.

So, we've had to come up with some time-efficient training mechanisms to get the most out of our compound exercises. Here are three of the most popular methods. You may or may not be familiar with them.

1. Superset two compound exercises and decrease the rest between them (for example: squat and chins).

Normally, a traditional muscle-building protocol would dictate two minutes between sets. If using the 5x5 method for muscle building, you would perform a set of five reps in the squat, which would normally take approximately 30 seconds. Then you would rest 2 minutes. After performing five sets, you would have spent 3½ minutes actually lifting and 10 minutes resting before moving on to your next exercise, the chin-up. Performing the same routine for the chin-up, you would then face another 13½ minutes before reaching your next exercise. Both the squat and the chin-up took 27 minutes to perform. If you supersetted the exercise—performing them back to back with only 1 minute of rest between them—it would only be 1½ minutes between the start of one exercise and the start of another, saving you a valuable 60 seconds. All 10 sets would take you a total of 15 minutes, saving you 12 minutes. In that 12 minutes, you could perform 4x5 with two more exercises, thus increasing the amount of work accomplished in the same time period it would normally take to perform two exercises. Not only that, but it would be 3 minutes between sets of squats instead of 2 in the original plan, thereby giving the legs more recovery (and also the back for the chins).

2. Superset two compound exercises and eliminate the rest between them.

Take your same two exercises and perform them back to back, with no rest. Then rest 1 minute before returning to the first exercise. If both exercises take 30 seconds to perform, then you'll have 1½ minutes before you perform the first exercise in the pairing again. This will take approximately 10 minutes to complete, which allows you to put another 5x5 pairing together and even a 3x5 pairing together in the same amount of time it took you to complete your original exercise program for only two exercises.

3. Circuit training.

Perform multiple exercises in a format that allows the most amount of rest between sets of each exercise. (This is also known as *vertical loading*.) These can be manipulated to elicit any outcome: strength, muscle gain, fat loss, and so on. Using the previous examples, you want to perform the squat and the chin-up and now have time to perform additional exercises like the deadlift and the press.

Set up your program in the following order:

1. Squats, rest 60 seconds
2. Chin-ups, rest 60 seconds
3. Deadlifts, rest 60 seconds
4. Presses, rest 60 seconds

Repeat the circuit the desired number of times.

As you can see, if each exercise takes 30 seconds to perform, then you'll have 5½ minutes before repeating sets of the same exercise. Three rounds of this circuit will take you 18 minutes, which is pretty time efficient.

But what if it got even better? What if you could make your training even more time efficient and still get the results you wanted?

Well, you can. You can perform a whole lot more work in a very, very short period of time. Not only that, it can be very productive work, not just work for work's sake.

What Are Complexes and Chains?

Complexes

I first discovered complexes as an underpaid Division I strength and conditioning coach. I figure I was underpaid because all the money had been blown on Nautilus equipment and all the previous coaching staff had to do was hit the athletes with their ineffective, fatigue-inducing, injury-increasing, time-wasting, machine-dominant "strength training program." One set to failure was all the athletes needed. (I kid you not! The extent of the former head strength coach's interaction with the athletes was to tell them to put on the seatbelt when using the hammer strength machines. But I digress.) So with limited equipment, limited space, and athletes with limited motivation, I was forced to improvise.

It's been said that "You always find what you need when you need it the most." Someone had left a *Muscle and Fitness* (like you've never read one) in the weightroom, and I saw an article by Romanian coach emeritus Istvan "Steve" Javorek about a system he'd developed to stimulate lean body mass, power endurance, strength endurance, and improved coordination in his Olympic lifters. Well, since I was an Olympic lifter, I read the article. It was on complexes.

A *complex* is a series of exercises performed in a sequence with the same weight and without rest. All the reps for a given exercise are performed first, before moving on to the next exercise. For example, perform five cleans followed immediately by five front squats and finally five presses, using the same weight for each.

I used complexes with great success with some of the varsity wrestlers. They could get in and out of the weightroom in less than 30 minutes. They had usable mat strength, mental toughness, and unlimited stamina. The wrestlers were pleased. Their coach was pleased. I had instant credibility.

Since then, I've used many, many variations of complexes with other athletes and my private clients. (Many authors have written briefly on them, but I thought I'd offer my own little twist, since I've used them as a coach, a trainer, and a lifter for 10 years now with great successes.)

Complex:

A series of compound exercises performed sequentially with the same weight and without rest. All the reps for one exercise are completed before moving on to the next exercise in the sequence.

I believe the true power of complexes is fully realized with the use of kettlebells. The shape of the kettlebell allows for more torque on the joints and therefore more stimulation of the affected joint musculatures. Plus, when performing ballistic exercises with a kettlebell, there is a longer stroke when compared to traditional barbell and even dumbbell variations. Therefore, since complexes were originally designed to improve multiple motor qualities using a barbell and/or dumbbells, it stands to reason that using kettlebells (for complexes) will only improve on the original intent of complexes.

What Does a Complex Look Like?

Here's how we designate a complex:

1. **List the exercises in the complex.**
   - Double swing (DSW)
   - Double high pull (DHP)
   - Double military press (DMP)
   - Front squat (FSQ)

2. **Determine the reps.**

   DSW x5
   DHP x5
   DMP x5
   FSQ x5

3. Choose your sets and your rest period.

The key factor to understanding what you see on the paper in front of you is to have it spelled out—for example:

Complex A
DSW x5
DHP x5
DMP x5
FSQ x5

- Perform 5 sets.
- Rest 120 seconds between sets.

That's it in a nutshell.

Chains

Alfonso Duran—my weightlifting coach and the best trainer on the planet for getting people freaky strong and freaky big—told me that his jerk stunk when he was on the Cuban team. So, his coach made him perform a unique exercise: one snatch plus one overhead squat plus one behind-the-neck snatch-grip jerk. He was to perform this for three reps.

I just thought this was another story about communist brutality in Cuba and thanked God that my weakness was not my jerk. It wasn't until later, and after much reading and analysis of some of my first weightlifting coach's methods, that I understood what that exercise was all about and why it was used. It was a chain.

Just in case you missed it the first time, as I did, a *chain* is a compound lift performed for reps—for example:

Clean and press + Clean and press + Clean and press = 3 reps of the Clean and press

I never really put 2 plus 2 together, though. Marc Cohen, my first weightlifting coach, used to make me do this kind of insanity as a method to acquire weightlifting technique: one pull + one power snatch; one pull + one power clean; one power clean + one front squat + one power jerk; and so forth. These were always vicious, especially once the weight started to get piled on. You were always glad when you were done with them. In fact, I guess they were so bad that I quickly pushed the memories of them into the far reaches of my mind. This, of course, makes them perfect for kettlebell training. (Cue evil laugh.)

Chains can be used for almost any end. Alfonso's coach used them as a specialized developer of shoulder flexibility and strength. Marc used them with me to develop technique. And you are going to strategically use them with your kettlebells to build muscle.

Therefore, I never really recognized them as a valuable training tool until it was almost too late. Once I did, I started playing around with compounds/chains with my kettlebells—nothing out of the ordinary, just lifts I was familiar with, for example, clean + front squat + press. I first recognized reading about chains with kettlebells in Edgar Mueller's *Goerner the Mighty*:

> *The kettleweights were placed in a row on the floor of the gymnasium, and working "Die Kette" (or The Chain) meant that Hermann would start out by taking the first kettleweight in the right hand and swinging it to arm's length overhead, after swinging it, the weight would be lowered to the shoulder and then pressed up again overhead, re-lowered to the shoulder and from there to the "hang" and then curled to the shoulder, then pressed overhead again and finally lowered again and replaced on the floor. He would then repeat this with the next kettleweight this time using the left hand. The whole length of The Chain would be worked in this manner.*

So that's a snatch, a press, and a clean followed by another press.

I still consider myself a fairly strong guy, but when I first tried Goerner's chain with just my 70-lb kettlebell, I was shocked! My arms and shoulders swelled up, and my heart rate elevated dramatically. And *that's* when I recognized the value of chains. I began experimenting with other chains and found them equally as brutal.

The results in muscularity and strength/endurance that kettlebell chains gave me forced me to reevaluate my weightlifting training. After rehabbing my injuries and returning to the platform, I implemented barbell chains to hone my weightlifting technique and acquire specific strength/endurance and weightlifting-specific hypertrophy. After a 7½-year layoff due to life, work, and injuries, doing chains helped me not only compete again but also snatch 10 kg below my best ever snatch in just 30 days of competition-focused training.

Chain:

A series of compound exercises performed sequentially in which each exercise is performed once before the sequence is started again. Each time the sequence is performed is considered one repetition.

So What's the Major Difference between a Complex and a Chain?

In a complex, all the reps of each exercise are performed before moving onto the next exercise. In a chain, one rep is considered one rep of each exercise performed sequentially. Then, the exercise sequence is performed again to complete the second rep.

In my opinion, doing chains is systemically more taxing than doing complexes due to the changing rhythm and tempo of the exercise sequencing. However, for building muscle by maximizing intramuscular tension, doing complexes, in general, is better.

So, why did I include chains in this book? First, to educate you, and second, because as I mentioned before, chains can be used strategically to aid in the muscle-building process, as you'll see later on.

What Does A Chain Look Like?

Here's how to designate a chain:

1. Write the exercises.
   DSW
   DHP
   DSN
   FSQ

2. Signify that each exercise should be performed sequentially for one rep.
   DSW + DHP + DSN + FSQ

3. Specify the number of reps.
   (DSW + DHP + DSN + FSQ) x5

4. Specify the number of sets.
   ([DSW + DHP + DSN + FSQ] x5) x 5

5. Select your rest periods.
   ([DSW + DHP + DSN + FSQ] x5) x 5
   • 120 seconds rest between chains

The Top 13 Benefits of Using Complexes and Chains

You may be asking yourself, Why should I use complexes and chains? My response to you is to ask, Why haven't you ever used them in your training?

The benefits of complexes and chains are numerous and powerful. The reality is no other method of training provides more "bang for the buck" per unit of time for the average trainee. I think you'll agree after reading about the following 13 benefits of using complexes and chains.

1. Are Time Efficient

The average American works 45 hours a week, has 2.2 kids, is involved in multiple after-school activities for those kids, and eats out at least three times per week. Again I ask you, who has time anymore for marathon two-hour Musclehead workouts?

Since you are already using kettlebells, you've undoubtedly figured this out. But are you being as efficient as you could be with your exercise time and achieving your goals? Perhaps you are struggling to complete you three one-hour training sessions each week. What if you could train more effectively in half the time?

Compound lifts offer ways of developing many different motor qualities at once: strength, strength/endurance, power, power/endurance, flexibility, and so on. (Many people are familiar with the concept of *training density*. For those who aren't, density quantifies how much work is performed in a set time period. If you can perform the same work in less time or more work in the same time, you have increased your training density. This is a measure of improvement.)

The bottom line is that if you're doing more work in less time than you used to, you're stronger. If you measure work by tons, pounds, or kilos lifted, you can really pile up the weight using compound lifts. For example, a five-exercise compound lift using 5 reps per set hammers out 25 reps in approximately 1 minute. Perform that compound lift for five sets and, assuming you're using a work-to-rest ratio of 1:1, then you've just performed 125 reps in approximately 10 minutes. If you happen to be using two 24-kg kettlebells, then that's 6,000 kg or 13,200 lbs—just over 6.5 tons in only 10 minutes! That's a lot of work in a short period of time!

2. Improve Systemic Strength/Endurance

Unless you're a competitive powerlifter or weightlifter, you aren't *really* training for maximum strength. Sure, kettlebells will dramatically improve your maximum strength, if you don't currently train for it. And many powerlifters use kettlebells in addition to what they are already doing, and they do produce a nice W-T-H effect. But first and foremost, kettlebells are primarily a tool of building strength/endurance. This, of course, is why they are so utilitarian, because life is about persevering. It's a marathon, not a sprint. Why not magnify their effects?

We've already determined that very few people, if any, have seven hours a day to train to be a world champion GS competitor. Not only that, but most people don't have that type of pain tolerance. So then, another way to improve work capacity—and therefore strength/endurance—is to perform multiple exercises with the same weight for multiple reps without putting the kettlebell down. This cuts down the monotony of performing the same exercise over and over again and exposes your muscles to different regimes of work simultaneously: isometric work, eccentric work, and concentric work all for a specific period of time. And because the work is varied and spread out over all your muscle groups simultaneously, the whole body, as a system, is working much harder than if you performed those particular exercises with rest between them.

One of my clients doubled the amount of work she could perform in a one-hour training session by using a variety of compound lifts over a 10-week period. She trained with me twice per week and rarely on her own. We inverted her work-to-rest ratios: She stared with a work-to-rest ratio of 1:2. In the last training session of that cycle, she was at a 1:1 work-rest ratio, and she nearly double the number of lifts performed in the same time period. What a great way to measure progress!

3. Build True Functional Core Strength

Many people, trainers included, are still at least concerned with, if not focused on, training the core. Speaking about the *core*, or the musculature surrounding the spine, evokes almost a cultlike reverence. People practically worship it. But the reality is that the core is no more important than any other part of your body. Try walking without your legs, and you'll see what I mean.

Depending on whom you ask, the core is comprised of upward of 28 different muscles. For our purposes, we'll consider it the abdominal musculature, the pelvic floor musculature, and the spinal musculature, including the paraspinals—the muscles that connect the vertebrae to each other. The core has two major functions: (1) to protect the spine (McGill, *Low Back Disorders*) and (2) to force transmission between the upper and lower halves of the body (Siff, *Supertraining*). That's it. Bottom line. Period.

This is vitally important, since the spine houses the spinal cord, the path along which all of the body's communication takes place. Screw that up, and, well, you know . . .

Your abs, then, really aren't designed to crunch while lying on the floor. That's just one of the many things you can do with them. Anybody who's thoroughly studied any of Pavel's material will understand the importance of power breathing. Power breathing creates IAP, or intraabdominal pressure, which acts as a balloon inside the body to protect the spine from too much compression and therefore injury. The core musculature is the vehicle for the IAP. The core, then, is designed to provide a noncompressible cylinder to transmit force production or force reduction to and from the upper and lower bodies.

In his research, Dr. Stuart McGill has discovered that people suffer back injuries from a lack of back strength/endurance, rather than a lack of strength. Compound lifts place the core under significant tension for an extended duration, therefore improving strength/endurance in the core musculature, including the lower back—true functional core training.

A female client of mine is married to an avid triathlete. One day after a run, he was performing so-called core training on his stability ball. She joined him through a "punishing" series of crunches, twisting crunches, oblique crunches, and the like. At the end of the session, he was sweating profusely and breathing hard. When he checked on her, he found that she was not. Incredulous, he asked her, this stay-at-home homemaker and mother of two, why she was able to keep up with him, the superstud triathlete. The answer: kettlebell clean and presses. That's only two exercises combined. Imagine throwing a windmill and snatch in there, too!

4. Improve Local Muscular Isometric and Dynamic Strength/ Endurance, Especially Grip and Hips

I used to train college athletes for a living. Here's what I noticed: The three things that just about any contact/collision or combat athlete can use more of is hand strength, hip/core strength, and neck strength. But not just any strength: strength/endurance—the ability to repeatedly exert enough muscular force without fatiguing to get the job done.

Compound lifts are grip intensive. The bells are in your hands for up to two minutes, depending on the drill. The finger and wrist flexors—and to a lesser extent, the elbow flexors—are all under constant tension, so they adapt to being able to exert and/or maintain force for prolonged periods of time. The same is true for the hips and abdominal musculature. Many compound lifts are sequences of different pulls, pushes, and hip/leg movements. Force is constantly being produced or reduced on either side of the joints in the lower body.

Compound lifts can be neck intensive. The upper trapezius is considered part of the neck musculature. So compound lifts with lots of pulling can strengthen and develop this muscle. Dynamic joint stabilization is occurring at various tensions in various joints throughout the body, so increased isometric strength/endurance is a product of training with compound lifts. This produces a stronger and therefore safer joint.

However, the seated athlete also needs the same strength in their hands, hips/ core, and neck. The top three overuse injuries in office workers are carpal tunnel syndrome, low-back pain, and chronic neck pain/TMJ pain. Therefore, compound lifts also specifically address their needs.

The wrestlers I trained using compound lifts trained with them twice a week in season using a barbell. (Unfortunately, we didn't have kettlebells to train with.) These athletes reported increased mat conditioning, increased grip endurance, and increased pulling power from the use of these compound lifts. Now, if they reported this from using a barbell with a 1.1" diameter handle, how much more could they have accomplished using a kettlebell with a 1.6" diameter handle?

Personally, I've noticed increased grip strength in my weightlifting exercises—the snatch and the clean—from performing kettlebell compound lifts. Not only that, but I am able to hold my positions on the platform much easier now, without any lower-back or hip fatigue. This makes my weightlifting sessions much more productive: I can increase the volume of my loading without my technique suffering due to fatigue. (Just as an aside, I believe maximal grip strength increases from performing kettlebell compound lifts. Although I am only an experiment of one, before incorporating these compound lifts routinely into my own training program, I came close to closing the "Captains of Crush" No. 2 Gripper. Since that time, I have closed two different No. 2s with no specific crush-grip training.)

5. Improve Cardiovascular Conditioning and Performance

Unless you've been hiding under a rock (and many Americans still are), you know that cardiovascular conditioning and by default, heart health, are best improved through interval training. Numerous scientific studies over the last five years have demonstrated that both aerobic and anaerobic performances are best improved through the use of interval training. Not only is interval training more efficient in improving VO2 max, but it also may be safer for long-term heart health.

Dr. Al Sears, in his book *The Doctor's Heart Cure*, states that traditional steady-state aerobic exercise can actually be detrimental to heart health, because the heart is already training for endurance in its day-to-day activities. Most people suffer a heart attack when they have to move quickly from resting to increased physical activity, like shoveling snow. Cardiovascular interval training actually strengthens the heart by building reserve capacity (the ability to pump more blood at a faster pace) and allows it to move from 0 to 60 mph, so to speak, in a matter of seconds without jeopardizing oxygen flow to the heart. This is vitally important to understand, because it is that lack of oxygen to the heart that causes a heart attack.

Compound lifts, then, are just what the doctor ordered.[1] Not only do they strengthen skeletal muscles, but they also challenge the heart and lungs because energy is constantly required of the body to match the effort required. Through physiology too complicated to go into here, the heart rate is elevated many times close to its supposed maximum. It decreases during rest, only to be elevated again. And thus, the cycle repeats itself. Therefore, it makes sense to use resisted interval training, such as compound lifts, to improve cardiovascular performance.

6. Improve General Physical Preparedness (GPP) and Work Capacity

The concept of general physical preparedness (GPP) has enjoyed a resurgence in the last 10 years thanks to American coaches such as Louie Simmons applying the information in old Soviet texts. As stated by famous Soviet athlete Edvins Ozolin (2006):

> *GPP contains the idea of all around physical development. Which is why the qualities developed by GPP may be called general as they express the ability of the organism and its psychological sphere to perform any physical work more or less successfully. Hence general endurance, general strength, general joint mobility, general coordination, general psychological preparedness.*

In a similar yet broader vein, work capacity is the ability to perform and recover from ever more intense bouts of training (work). Russian authors such as Medvedyev and Verkhoshansky have shown that highly qualified athletes need high levels of work capacity. Two of the limiting factors in achieving a high level of excellence in sport, other than skill itself, are GPP and work capacity.

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Because compound lifts are incredibly strenuous, they train many different motor qualities targeted in traditional conditioning programs: strength, strength/endurance, power, power/endurance, anaerobic fitness, flexibility, and so forth. Not only that, but compound lifts train these abilities *simultaneously*, instead of sequentially or concomitantly, like many other traditional strength and conditioning programs. One of the benefits of using a kettlebell instead of a barbell is increased improvement in larger ranges of motion—the idea of increased flexibility/strength/endurance. Having greater body control throughout larger ranges of motion decreases the potential for injury, which, coincidentally, is also one of the purposes of GPP.

Again using myself as an example, I notice that my ability to recover from weightlifting training sessions is hampered when I drop the kettlebell compound lifts—or any kettlebell lifting, for that matter—from my training program. I personally tend to favor the compound lifts because I can only perform five reps per exercise and still get my heart and lungs pumping. (I don't like to perform more than two reps on any barbell movement.) So, when I remove kettlebell lifting from my training program, not only do I notice a decrease in my on-the-platform stamina/wind, but I also notice a decrease in my ability to maintain the positions necessary to increase my performance. I also favor the unilateral nature of the kettlebell loading because it shores up weaknesses that I cannot attack with traditional barbell exercises. Compound kettlebell lifts fit the bill. When I compare myself to my weightlifting partner, who actually has more platform time than I do (time training the lifts on the platform, as opposed to just training), I appear faster than him and can perform a higher workload than him—all because of these compound lifts. Not surprisingly, he does not include kettlebell compound lifts in his training.

7. Improve Systemic Power/Endurance

The concept of *systemic* versus *localized* motor qualities is rarely explored, but intuitively, we know it exits. Do you think Lance Armstrong, in his prime, had greater power/endurance in his legs or in his arms? If you had to characterize his sport, cycling, by its primary motor quality, what would it be: endurance? strength/endurance? or power/endurance? I contend power/endurance, because although Armstrong participated in an endurance event, he won because he had the fastest time. He won because he produced the most power over the course of his endurance event.

Remember, power is time dependent. Therefore, it's possible to train a specific muscle group to display more of one type of motor quality over another. It's also possible for the entire system, as a *whole*, to manifest that particular quality. Compound lifts train the organism, your body, to produce more force, in less time, over a longer period of time. *That* is power/endurance.

8. Improve Mental Toughness

Let's face it, those who excel in athletics have what it takes "in the kitchen" to win (as a semipro hockey player I used train would say). Those who don't must train to do so. Compound lifts train the mind to endure. They sharpen the will. When your forearms and lungs are burning, you will hear two voices in your head: one saying "stop" and one saying "keep going." To become stronger mentally, you must listen to the second voice.

Therefore, compound lifts become an almost necessary tool for anyone competing in a contact, collision, or combat sport. As I've already mentioned, compound lifts were a major part of the in-season training of a select group of varsity wrestlers I trained when I was a strength and conditioning coach.

9. Improve Physiological Ability to Work under Fatigue (Lactic Acid Tolerance Training)

Anybody who has been a grappler knows the feeling of the forearm pump—the burning feeling that makes you feel like you can barely hold onto your opponent a second longer. Or how about those heavy legs, the ones that feel almost rubbery, that need to propel you to take your opponent to the mat just one more time for the win?

These feelings are symptoms of the accumulation of lactic acid in the bloodstream. (Incidentally, if you fail to hold on to your opponent or miss the takedown, see number 8 above.) Lactic acid interferes with the ability of your muscles to contract, thereby resulting in the inability to continue force production, whether in your forearms or your legs.

Studies by Kraemer[2] et al. have shown that force production decreases significantly with the onset of blood lactate in untrained individuals. However, in trained individuals, force production dips but doesn't substantially drop off.

To achieve this, lactic acid tolerance training is required. This is especially important for combat athletes, who experience up to 20 mmol (millimoles) per liter per minute. (Ten mmol per liter per minute is considered high.) A medium load, performed for a moderate duration for a moderate-to-little rest, typifies lactic acid tolerance training. Traditionally, a work-to-rest ratio of 1:2 has been used to train for lactic acid tolerance. However, as the athlete becomes better adapted, the rest can be reduced or the load increased. If using a static load, like a pair of fixed-weight kettlebells, it's best to reduce the rest periods.

Have you ever had a feeling of nausea after extreme exertion during a workout? That's the accumulation of lactic acid in your bloodstream. Your body is trying to turn that into lactate, a by-product of exercise that it can later use as fuel. That pukey feeling is your body letting you know that it's failing to do its job in turning the lactic acid into fuel. It needs to get rid of the excess, and it's about to do so by way of your stomach. The good news is that you can train in such a way as to overcome that feeling. That's what lactic acid tolerance training is, and compound lifts can help you do that.

Why is it important, you ask? Because you need to be able to hold on—to produce force even though you're tired. Why? 'Cause it's good for you! (See number 8 above and number 10 below.)

10. Produce Fat Loss

Recent studies, like the one by Envoldsen et al., confirm[3] what practitioners and coaches such as Gadja, McCallum, Poliquin, and others have observed and demonstrated in the trenches for almost 40 years: If you induce an increase in growth hormone via exercise, you will increase postexercise fat burning, especially in the abdominal region.

In their case and ours, that exercise medium is weight training. Lift weights in such a way to produce lactic acid, and you will lose fat (assuming, of course, your diet is right).

More studies,[4,5] this time by Kraemer and colleagues, demonstrate that lifting heavy weights, for a higher number of reps, for repeated sets, with little rest between those sets is the best way to create that growth hormone response. This is exactly what we accomplish with compound lifts.

One of the by-products of this type of training is lactic acid. It's turned into lactate, which is later used by the body as fuel. When the body produces enough lactic acid, it releases growth hormone. Fat burning then ensues. So, then, one of the other great benefits of this type of training is fat loss. Growth hormone is also released in other ways: at night while you sleep and in response to specific dietary guidelines—a low-carbohydrate, high-fat diet. Combine these three factors, and you have a powerful fat-burning combination.

"But wait—there's more," as Ron Popeil, infomercial king, used to say. Compound lifts produce fat loss through another mechanism: EPOC, or excess postexercise oxygen consumption. That's just a fancy way of saying *elevated metabolism*. Traditionally, EPOC has been studied using traditional aerobic exercises, such as cycling and running, in either an aerobic or anaerobic fashion.

Well, what about weight training? In a recent study on the effects of resistance training on EPOC,[6] the research team found that three exercises—the squat, bench press, and power clean—performed at momentary 10 RMs[7] in a circuit fashion, resting two minutes between exercises, for four circuits, produced a 20 percent increase in EPOC for 38 hours. Read that again: *a 20 percent increase for 38 hours*. These are huge numbers! This means that if your body requires 3,000 calories a day, for the next 38 hours, you will burn an extra 500 calories.

Now consider this: The late sports scientist Mel Siff, in his magnum opus *Supertraining*, states that a 1 RM clean and jerk costs 14.28 calories. How many calories does a clean and jerk with 50 percent of a 1RM burn if performed repeatedly? Answer: A lot.

Now, what happens when you combine the increased ranges of motion that kettlebells give you with multiple repetitions of clean and jerks and other exercises, such as the squat, in a circuit fashion, without ever putting the weights down (a compound lift), *without* rest? You achieve very high heart rates, high levels of blood lactate, growth hormone release, and, therefore, fat loss.

I recently performed a body composition assessment on one of my clients. She's 49 years old and has a sedentary office job but an athletic background. In the short time span of only three weeks (between assessments), she dropped five pounds of fat using only compound lifts, training with them an average of twice per week. (Of course, she was on a fat-loss diet, as well, but the caloric expenditure of these diets is outrageously high.) In ten weeks, she'd lost approximately 8 percent body fat training an average of two hours per week. That's pretty time efficient.

Just to ram home a point, another female client of mine lost 4½ inches off her waist in an eight-week time period, taking three weeks off from training due travel for work. (That's only five weeks of training averaging two training sessions per week.)

Why am I using women as examples here? Because women always assume that it's much harder for them to lose fat than men. And just in case you think I only train women and that this only works for them, yet another client of mine, Marc, recently dropped five pounds, breaking through his plateau at just above 200 lbs, using a variety of kettlebell compound lifts.

I must also mention here that these are not huge, long, complicated compound lifts. They are, for the most part, compound lifts that contain only three or four exercises. Want to try one that contains five?

11. Improve Coordination of Lifting Technique

It's commonly accepted that technique should be trained in the absence of fatigue. And I completely agree with that—95% of the time. When I was a novice weightlifter, I noticed something very interesting. I had some of my best lifts (keep in mind, Olympic-style weightlifting is very technical) when I was sometimes the most tired. I mean, I'd feel like I'd just been run over by a truck, and I'd attempt a lift. Most of the time, I made the lift.

This never stopped amazing me. I'd try this little trick on some of my athletes and clients with some less technical lifts, and the same would hold true. When I started training clients with kettlebells, I noticed the same thing.

Although I don't think I can explain this phenomenon technically, I think I can explain it psychologically. I call it the Lombardi principle, after the great Green Bay Packers coach Vince Lombardi. Lombardi would drill and drill his players on plays and technical aspects of plays long after many normal teams' practices would be over. His players would be exhausted, yet he'd keep pummeling them until they mastered what he wanted them to master. Lombardi's philosophy was "Fatigue makes cowards of us all." He figured that if his players could execute plays under extreme fatigue, they would have no problem when they were fresh. And guess what Lombardi's teams became known for? Executing plays all the time, especially in the fourth quarter.

As another example, I recently took on a new client—a referral from a very good client of mine—who was already in great shape. (Great shape means almost a full six-pack, defined arms, etc.) She taught a group resistance training class three times a week at a local gym and thought she had good stamina. I was attempting to teach her the snatch, but I could see that she was trying to muscle it with her arms, banging up her wrists in the process. My solution? Tons of swings followed by clean and presses (compound lift). After doing them, she was soaking wet and thoroughly winded, her upper body feeling very heavy and her glutes feeling trashed. Then we approached the snatch again. The result? Perfect snatches.

12. Decrease Training Monotony

Let's face it: Some of us can use the same five exercises over and over and over and make great gains just by changing their order or their loads. Others of us need a lot of change. Louie Simmons, Westside powerlifting guru extraordinaire, postulates that extroverts need lots of variety in their training programs and introverts, less variety.

I guess this theory explains a lot of things. If you are extroverted, you'll love training with compound lifts. Every training session can be new all over again, just by changing one exercise. And not only that, but you can make constant improvement just by using the "Same but different" principle. For example, you can swap out a double military press for an alternating military press and still make great gains in shoulder size and strength. Another day, you can follow the exact same compound lift, but instead of using two bells, you use only one, make it heavier, and perform unilateral compound lifts. The variety is endless.

So, for you extroverts out there, you never have to be bored again with the same old workout. A new workout is just a tweak away.

13. Increase Lean Body Mass

This is the one you've really been waiting for, and this is what ***Kettlebell Muscle: Maximum Muscle in Minimum Time*** is all about.

What is the number-one necessity for muscle gain? Tension, be it slow or fast, is the name of the game.

The time under tension for the average compound lift is approximately 60 seconds, right down the middle of the 45- to 75-second time-under-tension philosophy of some strength coaches. But here's the really neat part: For the longer compound lifts, some as long as two minutes, tension shifts from one muscle group to another, exposing multiple muscle groups to various tensions.

Soviet sports scientist and weightlifting champion Arkady Vorobyev found a greater increase in strength when he adjusted the training load sharply, as opposed to following smoother, stepwise progression in training loads. This means more possibility for increased strength and muscle growth due to increased frequency under various training loads of each muscle group participating in a compound lift.

For example, one day you perform a shoulder-dominant compound lift; the following training session, a leg-dominant compound lift; and the following, a back-dominant compound lift. However, in each training session, the shoulders, legs, and back are exposed to a training stimulus. This means there is greater potential for muscular growth of each of these muscle groups, not only because of multiple training frequencies but also due to the varying intensities of the different loading parameters.

The same 49-year-old female client I mentioned as an example in the previous point on fat loss gained four pounds of lean body mass in that same three-week period! *Are you paying attention? This is a 49-year-old female training for fat loss!* If she can achieve these types of results using kettlebell compound lifts, how much more can you achieve? (As an aside, she gained six pounds of lean body mass in a nine-week period.) What are you waiting for?

Finally, complexes and chains allow you to put on muscle in all the right places. More than 10 years after the term *functional* was introduced, the fitness industry is still using it to designate specific forms of training, such as *functional training*. Well, complexes and chains allow you to develop functional muscle simultaneously—muscle you can use, need to use as part of your daily routine, muscle in the upper back, along the spine, the hips, the shoulders, the arms and the legs. If a true functional training program has ever existed, it would be one using kettlebell complexes and chains.

Why did I include 13 benefits of training with complexes and chains when clearly some of them don't have anything to do with building muscle? Ahhh, that's where you're wrong, my friend. *All* 13 aid in providing you with a more muscular physique! Try this form of training and see for yourself.

So, what exercises would you include in an exercise program made up of complexes and chains? BIG ones.

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1. If you have heart disease, check with your physician before performing compound lifts.
2. Deschenes MR, Giles JA, McCoy RW, Volek JS, Gomez AL, & Kraemer WJ. (2002, Feb.). Neural factors account for strength decrements observed after short term muscle unloading. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 282(2): R578–583.
3. Enwoldsen et al. (2007 Sept.). Post-exercise abdominal , subcutaneous adipose tissue lipolysis in fasting subjects is inhibited by infusion of the somatostatin analogue octreotide. Clin. Physiol. *Funct. Imaging.* 27(5): 320–326,
4. Kraemer et al. (1990, Oct.). Hormonal and growth factor responses to heavy resistance exercise protocols. *J. Appl. Physiol.* 69(4): 1442–1450.
5. Kraemer et al. (1991, April). Endogenous anabolic hormonal and growth factor responses to heavy resistance exercise in males and females. *Int. J. Sports Med.* 12(2): 228–235.
6. Schuenke MD, Mikat RP, & McBride JM. (2002, March). Effect of an acute period of resistance exercise on excess post-exercise oxygen consumption (EPOC): implications for body fat management. *Eur. J. Appl. Physiol.* 86(5): 411–417.

The Exercises

(the Meat and Potatoes)

Because you'll be overloading the body to produce muscle, you'll need two kettlebells for this program, preferably of the same size. Sorry, one kettlebell just isn't going to cut it for this program.

The following sections identify the exercises and describe how to perform them.

Why Double Kettlebells? Why Not Just a Barbell?

Why, indeed!

First, we need the systemic overload provided by two kettlebells. Because there is more strain on the body and more momentary and accumulated tension, this will tax the body more than using just one kettlebell.

Second, unlike a barbell, a kettlebell produces more torque on the body. The shape of the handle aligns the joints and recruits more muscle when the kettlebell is in the hand. Not only that, but due to the handle placement, the shape allows you to swing the kettlebell between the legs. There's nothing new here on the surface. But when you stop to think about it, there is a longer stoke involved at a higher speed than with heavy barbell lifts. This gives you the potential for more work and therefore more adaptation.

Third, for the kettlebell, technique with the repetition lifts tends to improve with more reps in a set. In contrast, for the barbell, technique tends to deteriorate after two to three reps.

Finally, using kettlebells just feels like more weight. Doing double clean and presses with 2x32 kg just feels harder than 140 lbs of barbell. Try it. I think you'll agree.

The Double Swing (DSW)

Double Swing (DSW)

The average American works 45 hours a week, has 2.2 kids, is involved in multiple after-school activities for those kids, and eats out at least three times per week. Again I ask you, who has time anymore for marathon two-hour Musclehead workouts?

Since you are already using kettlebells, you've undoubtedly figured this out. But are you being as efficient as you could be with your exercise time and achieving your goals? Perhaps you are struggling to complete you three one-hour training sessions each week. What if you could train more effectively in half the time?

Your Fly Is Down...

Here's a quick checklist that you should use to achieve the lockout of the DSW, and indeed every double kettlebell drill:

1. Push your feet through the floor.
2. Pull your kneecaps up into your groin.
3. Make your navel and tailbone meet in the middle by forcefully tightening your glutes and contracting your abdominals as if bracing for a punch.
4. Power breathe!
5. Keep your shoulders down and lats contracted.

This is a sensation that can be referred to as *zipping up* or being *zipped up*.

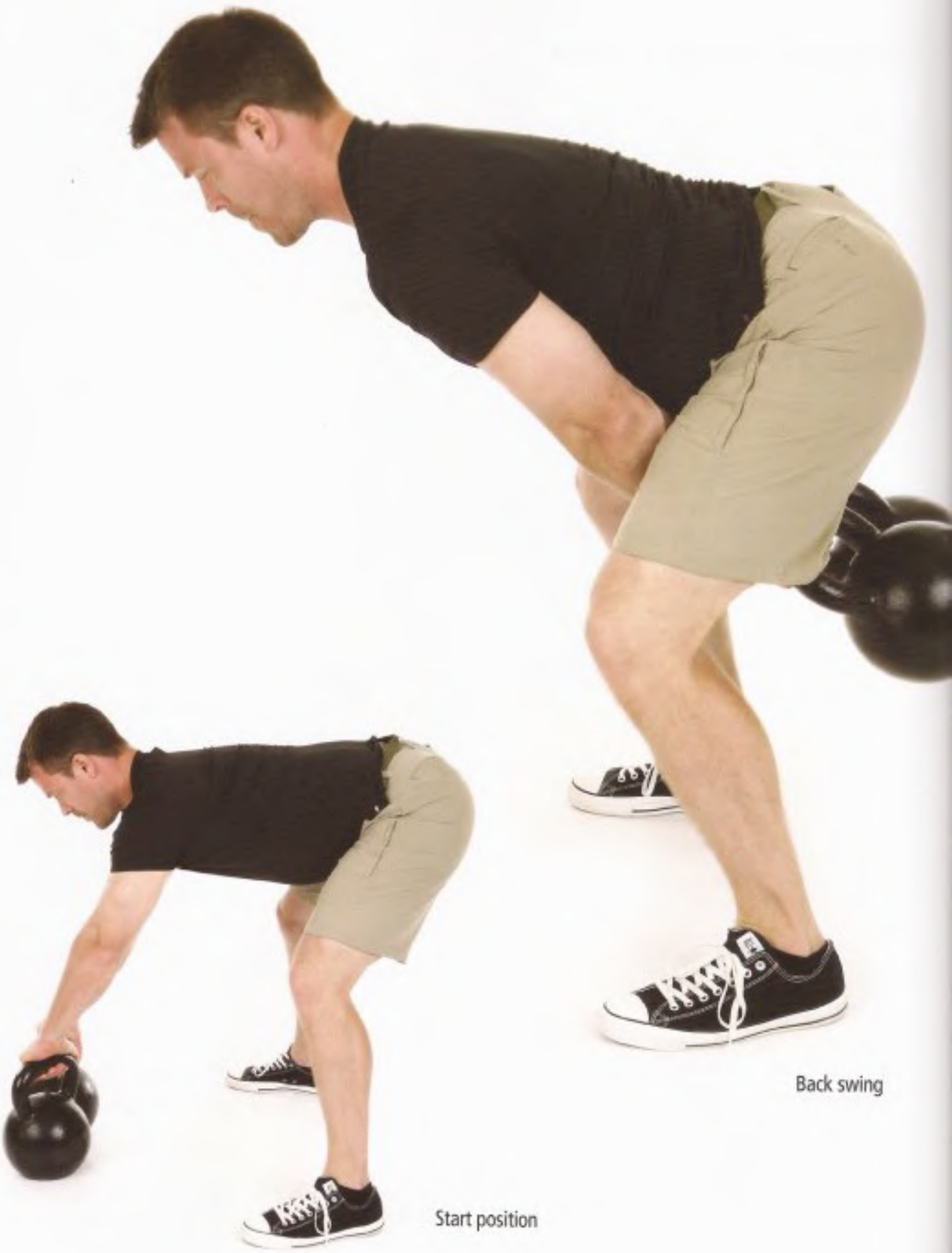
Remember that the backswing of the DSW is *active*. This demands that the kettlebells don't fall back between the legs but that you forcefully and aggressively hike the kettlebells behind you, leading the motion from the hips by pulling them back and aiding them by throwing the kettlebells behind the hips with the hands.

To ensure that the kettlebells are in the proper position during the backswing, you should feel your forearms on the insides of your adductors high near the groin. This will ensure that the kettlebells are traveling back and not down, creating the possibility for them to yank on your lower back.

Also remember that with all kettlebell ballistics, the following mantra holds true:

The hips drive and the arms guide.

This, of course, means that the hip action for the double clean (DCL), the double snatch (DSN), and the double high pull (DHP) will be *exactly* the same, only with varying degrees of force.



Back swing

Start position

The Double Swing (DSW)

Double Clean (DCL)

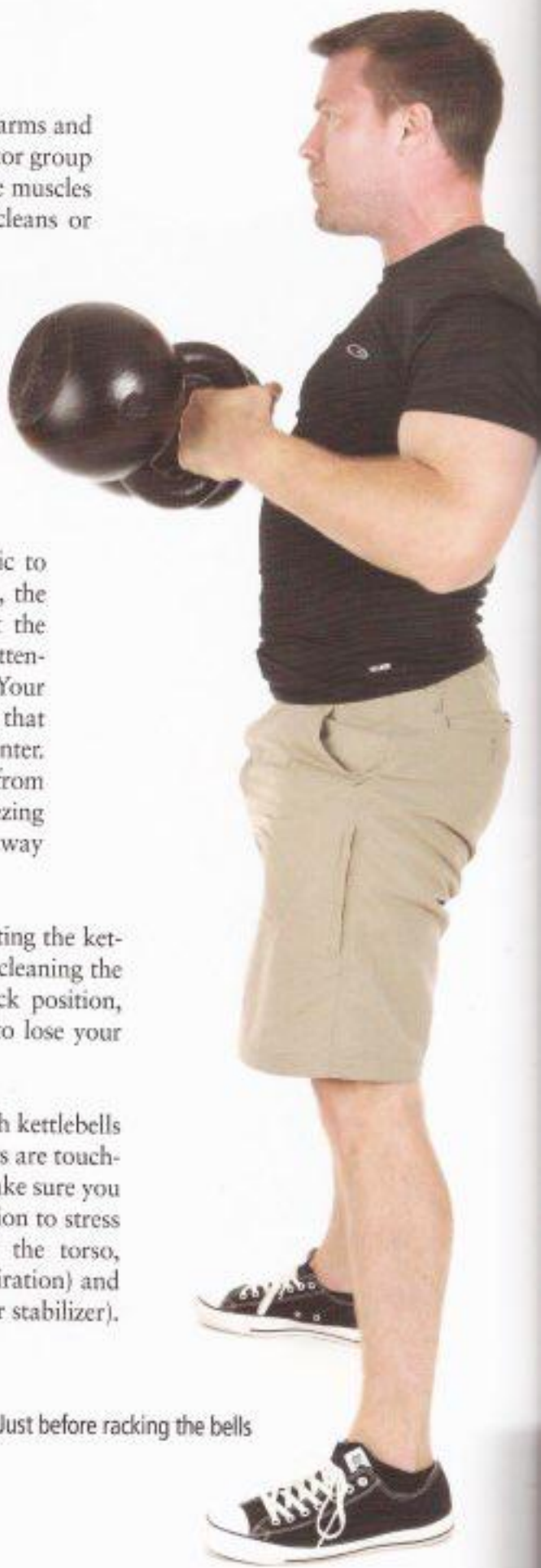
The DCL is an outstanding developer of the forearms and biceps. Its fast eccentric action forces the elbow flexor group to quickly decelerate the weight, thus stretching the muscles under load. Anybody who has done dead hang cleans or snatches can attest to this.

The DCL, because of the greater total load used (two kettlebells instead of one), requires more force production on the swing phase of the clean. Since, of course, there is an equal and opposite reaction for every action, the loading on the backswing is also faster. The traps are also majorly loaded.

The DCL is the easiest double kettlebell ballistic to learn after the DSW. As with the single-arm clean, the elbows stay glued to the ribs throughout almost the entire motion. Upon the backswing, pay careful attention that your elbows are glued to your ribs. Your thumbs should be pointing back, behind you, so that your fists are approximately 45 degrees from center. Both hands should form a continuation of the V from the set-up. As you snap your hips, focus on squeezing your ribs with your elbows, so they don't move away from the body.

Focus on externally rotating your thumbs and lifting the kettlebells to your waist. This will keep you from overcleaning the kettlebells and causing them to crash into the rack position, bruising your shoulders and possibly forcing you to lose your balance, falling backward.

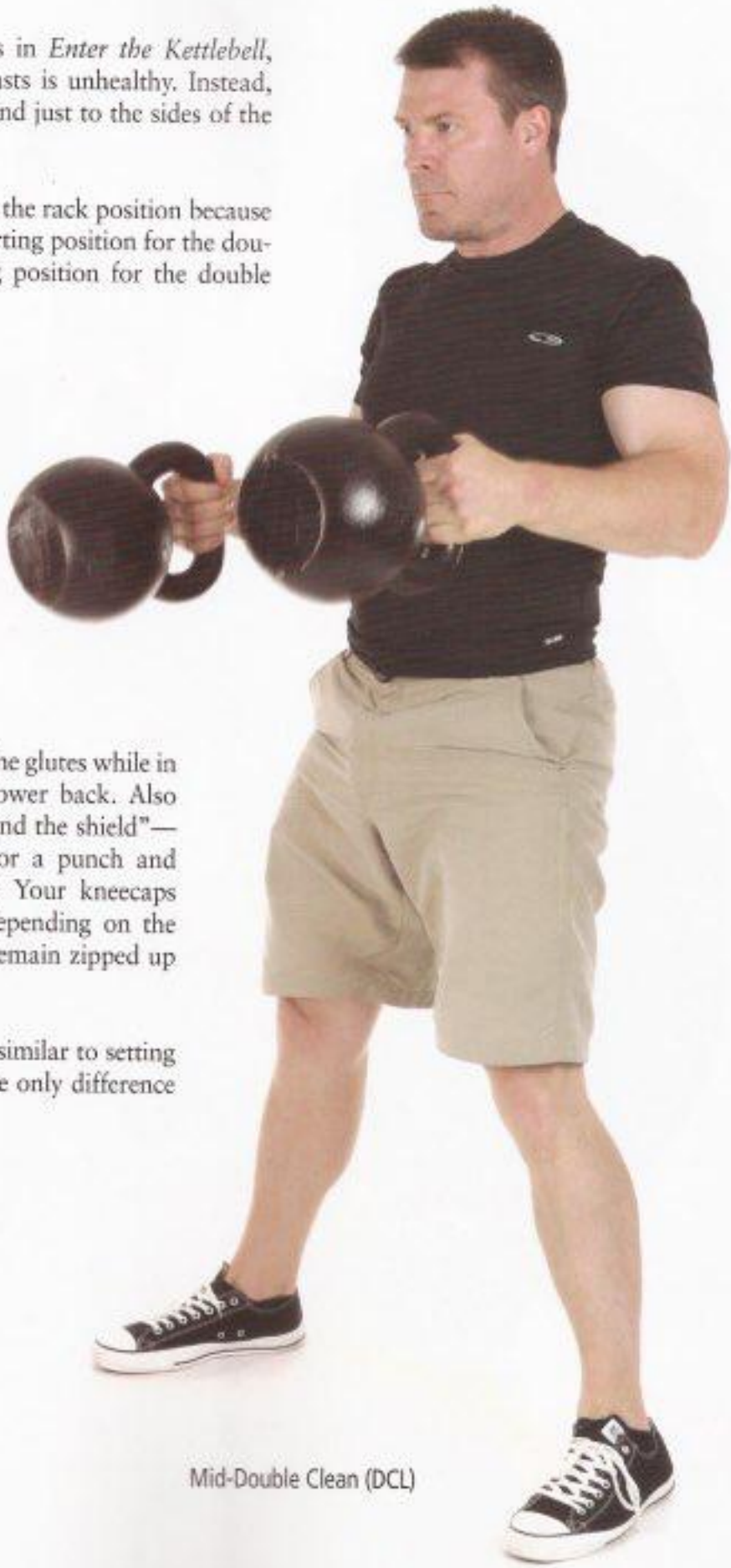
The rack position for men is completed when both kettlebells are resting on the chest and the knuckles of both fists are touching or the handles of both bells are touching. Just make sure you don't smash your fists together. This is a great position to stress the abdominals, obliques, and other muscles of the torso, including the intercostal muscles (which aid in respiration) and the serratus anterior (which is an important shoulder stabilizer).



Mid-Double Clean (DCL) Just before racking the bells

For women, as Pavel mentions in *Enter the Kettlebell*, resting the kettlebells on the breasts is unhealthy. Instead, keep the kettlebells off the chest and just to the sides of the shoulders.

Learn how to be comfortable in the rack position because we will return to it. This is the starting position for the double military press and the resting position for the double front squat.



It's critically important to pinch the glutes while in the rack position to protect the lower back. Also make sure you are "breathing behind the shield"—bracing the abs as if preparing for a punch and breathing shallowly behind them. Your kneecaps may or may not be pulled up, depending on the load. A good rule of thumb is to remain zipped up while in the rack position.

Setting up the backswing is very similar to setting up the backswing for the DSW. The only difference is *intent*.

Mid-Double Clean (DCL)

The Double Clean (DCL) with the bells in the rack

Your arms will be in the same position on the backswing as they are in the DSW: against the inside of the adductors, high near the groin. To get them there from the rack position, you'll push your hips back and intend to throw the kettlebells through your groin, thumbs first. Push your arms down and back, rotating your thumbs back between your legs. Of course, at the last minute, you'll get out of the way! You'll also attempt to keep your elbows as close to your ribs as possible. Your upper arms should not swing away from your torso.

Reverse the process and reclean the bells.

The Double Clean (DCL) with the bells in the rack

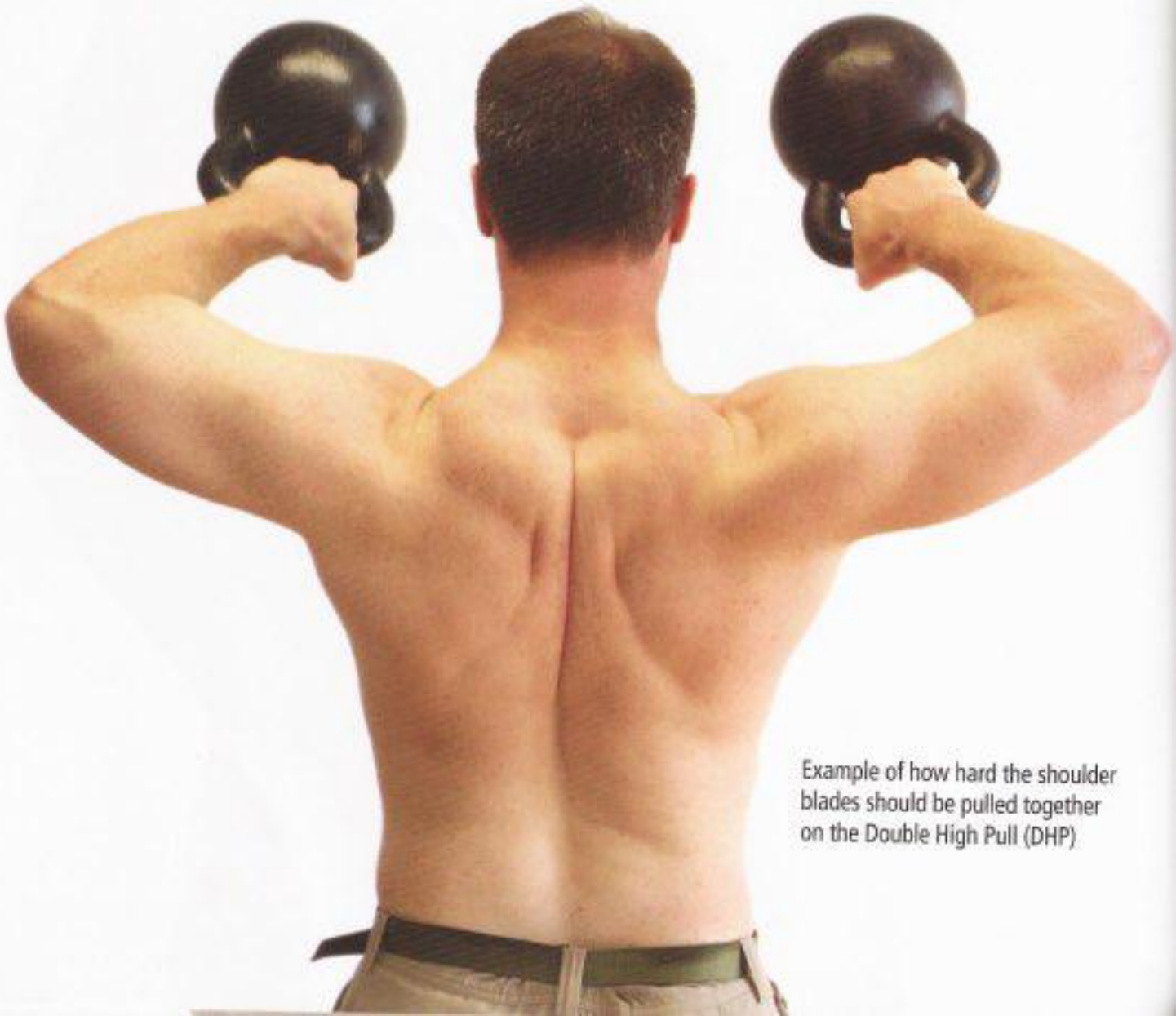
The Double High Pull (DHP)

The DHP is traditionally used as a transition exercise to help teach the connection between the hip and arm mechanics of the hard-style single-arm snatch. However, it's also an outstanding upper-back developer, punishing the trapezius, rhomboids, and rear deltoids.

Your intent is to finish the exercise with your elbows fully flexed, your upper arms parallel to the floor, and the kettlebells next to your cheekbones. Your arms should be parallel to each other. The sensations you are looking to produce are twofold:

1. The kettlebells feel like they are weightless, floating in the air.
2. You will feel your shoulder blades squeezed tightly together.

Of course, you will also be zipped up, just as you would in the DSW.

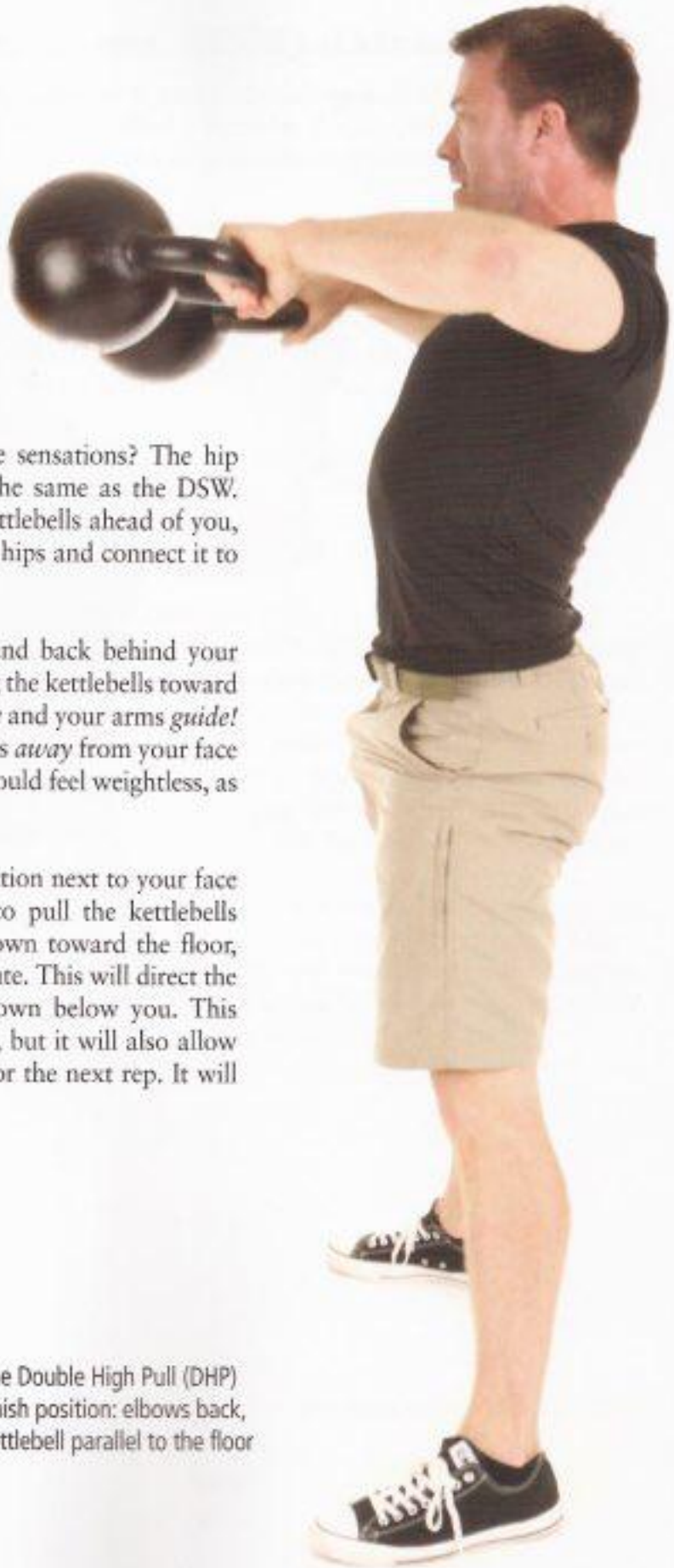


Example of how hard the shoulder blades should be pulled together on the Double High Pull (DHP)

So, how then do we achieve these sensations? The hip mechanics of the DHP are exactly the same as the DSW. However, instead of projecting the kettlebells ahead of you, harness the energy produced by your hips and connect it to your elbows.

Explosively pull your elbows up and back behind your body at the end of the swing, directing the kettlebells toward your head. Remember, your hips *drive* and your arms *guide!* Now is the time to guide the kettlebells *away* from your face and next to your head. Again, they should feel weightless, as if they are just hanging in the air.

To get from the weightless end position next to your face into the backswing, your intent is to pull the kettlebells down into your groin. Push them down toward the floor, and get out of the way at the last minute. This will direct the bells back behind you, instead of down below you. This intent is not only safer for your back, but it will also allow you to generate the force necessary for the next rep. It will also save your grip.



The Double High Pull (DHP) finish position: elbows back, kettlebell parallel to the floor

Double Snatch (DSN)

Setting up the DSN is exactly the same as setting up the DSW. The only difference is where the kettlebells end up, which, of course, is over the head in the lockout position.

The simplest way to get the kettlebells overhead is to think about the DHP but then direct your elbows up, instead of back. At the point when the kettlebells seem to stall or feel weightless, aggressively punch the ceiling. The kettlebells will fly upward, rotate in your hand over your fists, and land gently on the back of your wrists. If they don't land gently, then you're doing it wrong!

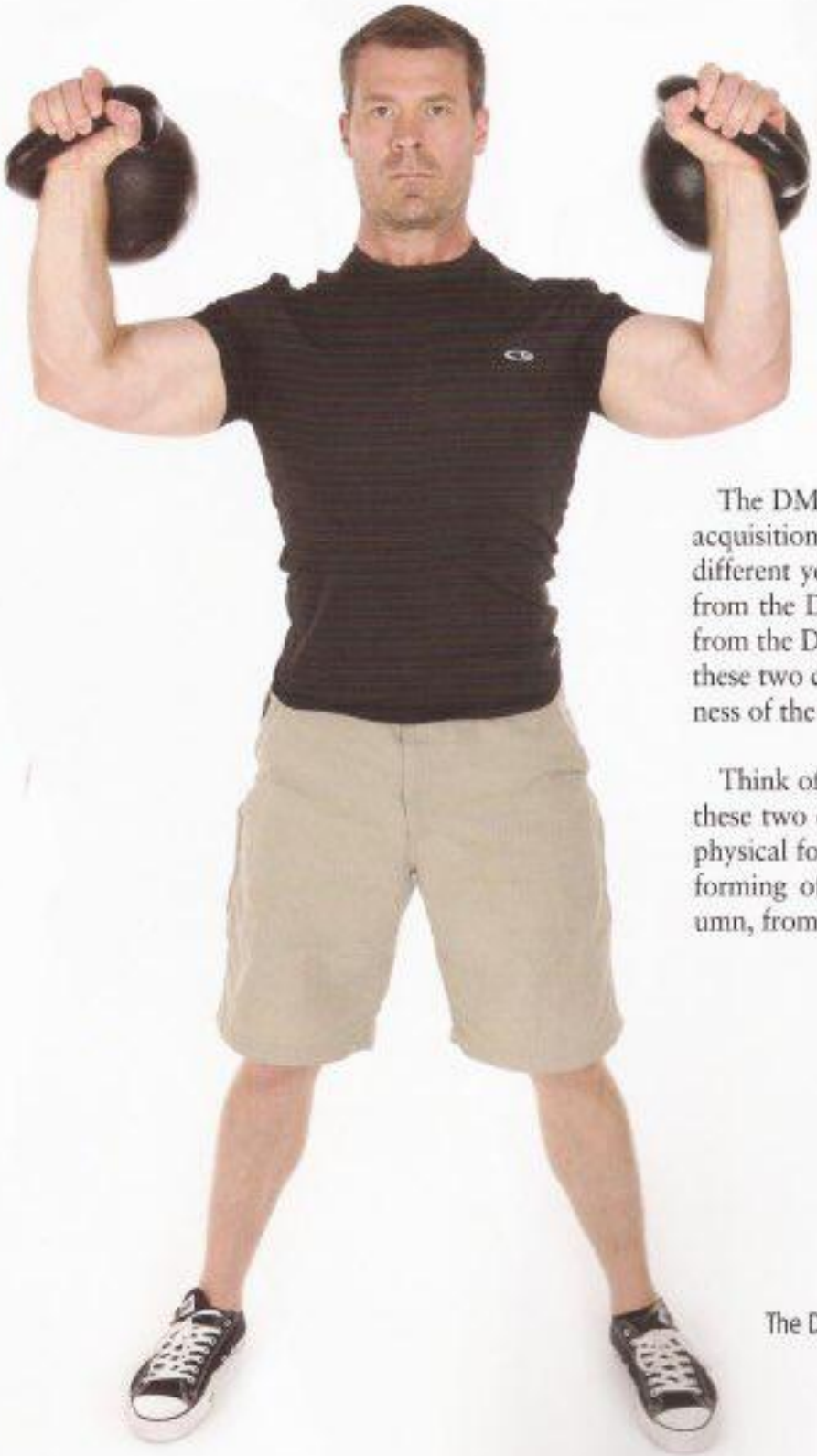
Another good mental image comes from thinking about the single-arm snatch while performing the DSN. This also produces a good transfer of the mechanics.

Remember to use the same hip mechanics for the DSN as you would for the DSW. The only difference is that you'll have to generate more force, since the bells are traveling further.

The Double Snatch (DSN) Lockout

The Double Military Press (DMP)

Is there an exercise that uses more muscle and is a better overall upper-body developer than the double military press? I think not.



The DMP is the culmination of the acquisition and management of two different yet similar skills: zipping up from the DSW and the rack position from the DCL. If you haven't grasped these two concepts, then the effectiveness of the DMP will be lost on you.

Think of managing, even mastering these two concepts as the very literal physical foundation for the DMP: the forming of a rigid platform, or column, from which to press.

The Double MIlitary Press (DMP)

Proper rack position before begining press

Every press begins from the floor, and the DMP is no exception. From the rack position, push the kettlebells up, away, and behind you. Also push your feet through the floor, remaining zipped up. Your forearms should remain perpendicular to the floor throughout the entire motion—lifting and lowering the bells. This will ensure that your lats remain engaged throughout the DMP.

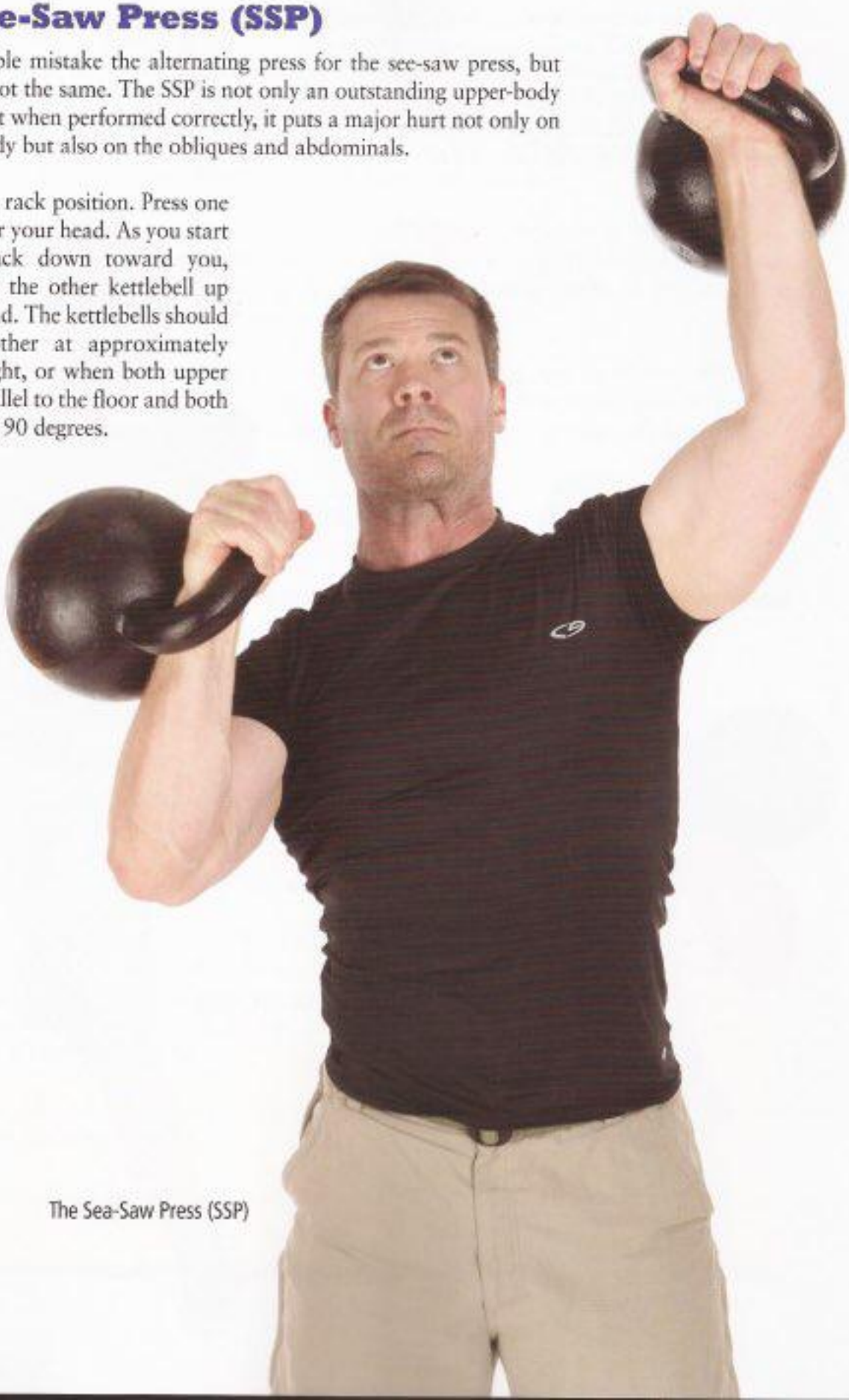
Another trick for keeping the lats engaged is to push your sternum up and out at a 45 degree angle to floor as you press the kettlebells. Not only that, but doing so will also recruit your pecs.

As with the single-arm military press, so it is with the DMP: You don't lower the kettlebells; you actively pull them back into the rack using your lats. Again, an effective way to ensure the lats are engaged on the descent is to push the sternum out and away from the body. Another approach is to imagine that you're bending a metal bar about your head.

The See-Saw Press (SSP)

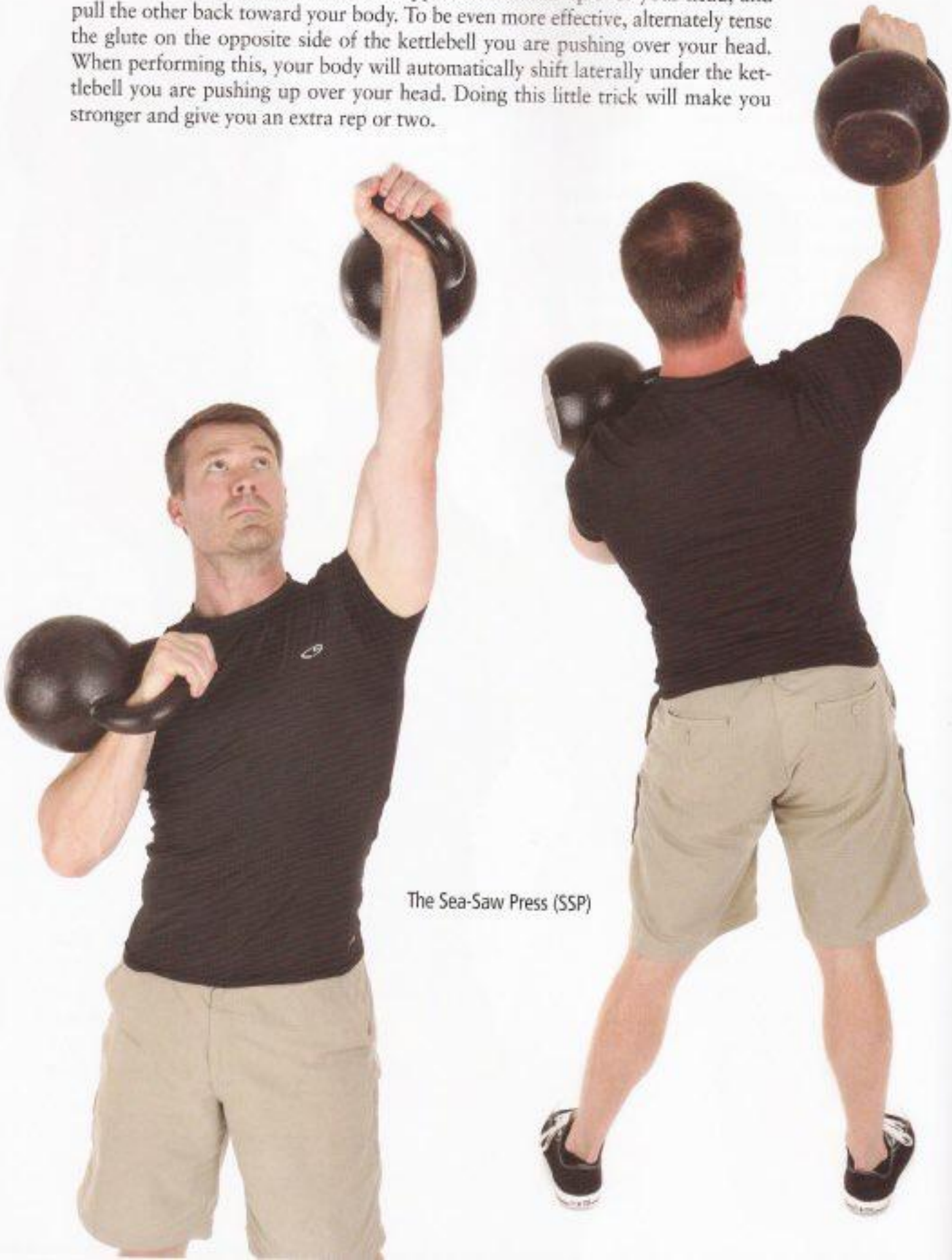
Many people mistake the alternating press for the see-saw press, but the two are not the same. The SSP is not only an outstanding upper-body developer, but when performed correctly, it puts a major hurt not only on the upper body but also on the obliques and abdominals.

Start in the rack position. Press one kettlebell over your head. As you start pulling it back down toward you, start pushing the other kettlebell up over your head. The kettlebells should pass each other at approximately forehead height, or when both upper arms are parallel to the floor and both elbows are at 90 degrees.



The Sea-Saw Press (SSP)

Then reverse the process. Push the opposite kettlebell up over your head, and pull the other back toward your body. To be even more effective, alternately tense the glute on the opposite side of the kettlebell you are pushing over your head. When performing this, your body will automatically shift laterally under the kettlebell you are pushing up over your head. Doing this little trick will make you stronger and give you an extra rep or two.



The Sea-Saw Press (SSP)

Double Push Press (DPP)

The DPP is a great exercise in and of itself. It is an outstanding exercise to develop explosiveness (power). For the purpose of muscle building, it allows you to overload the musculature of the shoulder girdle with kettlebells that you can't press (pay attention here) or can no longer press due to fatigue. The DPP also a great developer of the Vastus medialis, the little teardrop-shaped muscle just inside the knee, which is an important medial knee stabilizer.

There are two ways to perform the DPP. One is to start with both kettlebells in the rack position. Quickly dip your knees, keeping the bells in the rack and your back perpendicular to the floor. Then, just as quickly, reverse the motion by driving your feet through the floor. You should be ready to start pressing the kettlebells as soon as your knees straighten.

Think of a wave of force moving from the floor through your legs, into your arms, and out of the top of your body. It's important to understand that your ability to press the bells depends on your ability to quickly generate force. If this doesn't make sense to you, consider the following cue that I use with my clients:

Jump and punch.

The Push Press: Heels On or Off the Floor?

Some coaches cue their athletes to keep their heels down on the push press as they drive the weight over their heads. Others cue their athletes the opposite, allowing their heels to come off the floor while driving the load overhead.

What's the deal? Who's right? Both and neither.

It depends on the individual. When I was first taught the exercise by my weightlifting coach, it was acceptable to allow the heels to lift from the floor. Over time, though, the "powers that be" in the weightlifting community started arguing whether the athlete (read weightlifter) should pull and push flatfooted or with the heels (and even the feet on the pull) leaving the platform.

Which produced more force? Both camps have answers, and both camps have medalists and record holders.

Use what works best and feels most natural to you.

This seems to work for just about everyone, regardless of athletic ability or coordination level.

Now the kettlebells are over your head. How do you get them down? There are two ways:

1. Pull the bells down, as you would on a press.
2. Drop the bells back into the rack.

Dropping the kettlebells back into the rack sounds simple enough, but if done incorrectly, it will hurt you. The key is to absorb the force of the impact of the bells on the shoulder girdle, catching the bells with the legs by quickly bending the knees. This dissipates the force into the legs and back into the ground. This quick knee dip, or eccentric load, is one of the reasons this exercise is a great quad developer.

Two Dips or One?

Some questions arise with the DPP on how to perform consecutive reps. Do you just keep "dropping and popping"—that is, drop the kettlebells back into the rack and immediately explode right back up? Or do you straighten the legs after the catch, reset, and move on to the next rep?

The answer is the latter. Reset your position between each rep. Doing so is harder and will ensure correct technique.

Double Push Press (DPP) at the dip and the lockout

Double Front Squat (FSQ)

This is the granddaddy of the kettlebell grind, in my humble opinion.

I love to squat with a barbell, yet I hate the kettlebell front squat. Why? Because it's a darn hard exercise that works the living daylights out of every muscle in your body, especially if you do it at the end of a complex! (Now who would be sadistic enough to do that, I wonder?)

I hate the Zercher squat, a squat where the barbell rests in the elbows. It just hurts my elbows. (I'm sensitive. What can I say?) Consequently, I won't do the Zercher. The best thing about it, though, is that it teaches you how to compress your abdomen and how to sit between your legs. The kettlebell front squat teaches you the same things, if you do it correctly, but without the elbow discomfort.

The Big Toe Knows

Rarely talked about is the importance of the big toe for loading the quadriceps, hamstrings, and hips in any sort of squat, especially the front squat. In fact, I don't think I've *ever* seen it mentioned as being important in squatting.

Connected to the big toe and running underneath the foot and attaching to about the middle of the tibia is a muscle called the *flexor hallucis longus* (FHL). It's often overlooked but shouldn't be. It's a very important knee extensor, and neglecting this fact will most likely ensure that'll you end up with some sort of knee pain.

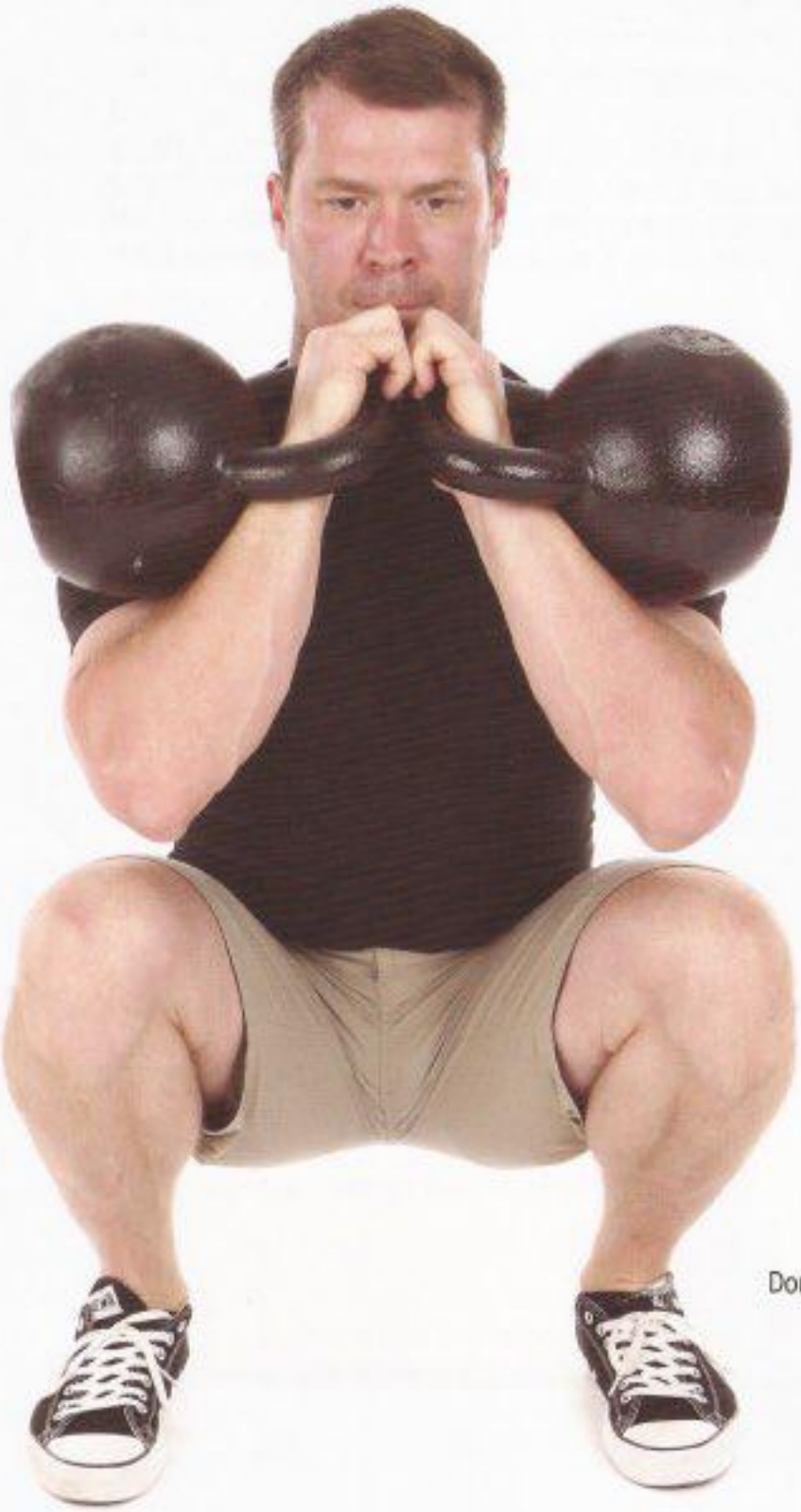
Wait, aren't the quadriceps knee extensors? Yes, but the FHL aids in extending the joint from the opposite side of the knee and helps ensure adequate loading of the glutes and hamstrings in the squat.

To ensure you load this very important muscle and thereby protect your hips and knees, as you pull yourself into the squat with your hip flexors, actively push your knees forward and your butt backward. This will create pressure on the big toe and adequately load the FHL.

Interestingly enough, by doing this, you'll also increase your strength through an effect called the *summation of forces*.

Bottom line: Load the toe!

As similar as they are, the Zercher and FSQ are a study in contrasts. Both require intense abdominal pressurization. However, the Zercher tends to emphasize more recruitment of the hip and low-back musculature, whereas the FSQ emphasizes the quadriceps. This, I believe, is due to the leverage of the load placement on the body. Although both loads compress the abdomen, because the Zercher is closer to the floor and further from the body than the FSQ, its leverage forces more posterior chain recruitment. Because the kettlebells are held in the rack position and become part of the body in the FSQ, they force you to counteract their pull to the floor by leaning your torso slightly backward, keeping it upright, and thus placing more emphasis on the quadriceps.



Double Front Squat (FSQ)

Some will argue that you should only squat with a barbell and that the loading provided by a pair of kettlebells isn't enough to stimulate any sort of growth. Do me a favor: Do 20 reps with 2x32 kgs without putting the kettlebells down, and then get back to me.

To perform the FSQ, clean the kettlebells to the rack position. Your foot placement should be just outside your hips, maybe slightly wider. Point your feet straight ahead or turned out to about 15 degrees.

Inhale and hold about 75 percent of your maximum lung capacity. You'll feel your abdominals contract. Contract them harder by actively bracing for a punch.

Using your hip flexors, pull yourself into the hole. Your intent is to pull yourself down and back or to pull your knees to your chest. As you do so, push your knees forward over your feet. The sensation should be your butt going backward and your knees going forward—like you're pushing the two apart. Doing so will keep your weight centered over each foot.

To keep the kettlebells from falling out of the rack while in the hole, pull them down toward your waist. Contract your lats to hold them in place while simultaneously pushing your chest up and out. Think "big chest." Don't round your lower back by letting your tail tuck under you. (If this happens, you are going too low and need some corrective work.)

When your butt touches your calves, stand up. Push the floor away from you, but also drive yourself up from the ground. Think of leading with your traps. This will help keep you upright and prevent your knees from locking before your hips.

Don't forget to zip up, just like you would in doing any of the ballistic movements. This will also help you stand up. Interestingly enough, if you focus on zipping up, you can fake out your mind in situations of fatigue and still maintain a near perfect squat!

A Word About Nutrition

(Speaking of Meat and Potatoes...)

First, let me throw out my disclaimer: I am not a Certified Nutritionist, so in theory, I have no legal leg to stand on here. So, legally, these are not recommendations or guidelines you should follow. These are only guidelines that every nutritionist or medical doctor worth his or her salt that I have read and studied over the last 15+ years has recommended that you and I use to gain high quality muscle. I am distilling them down and passing them along to you. I strongly encourage you to read for yourself. However, if you refuse to use these guidelines out of such fears as "gaining fat," so be it. Just don't be disappointed when you can't recover from these workouts and don't grow any muscle.

The following sections identify the exercises and describe how to perform them.

1. Eat A Lot. Eat more than you normally would. But don't gorge on junk or fast food. That being said, don't eat too much.

   What's a good rule of thumb?

   Eat approximately 10-25% more calories per day than you are currently.

   What if you don't know how much you currently eat?

   Then start with your bodyweight and multiply it by 15. Stay there for a couple of weeks. If your weight goes up, you're on track. If it doesn't, multiply your weight by 18 and work with that amount.

High Quality Food + Kettlebells = Lots of Muscle

Recently, using a nutritional program developed and overseen by Natural Food Guru and author of such paradigm-shifting books as *The Maker's Diet*, Jordan Rubin, a small group of men from all walks of life, including a NFL Super Bowl Champion running back, used a high-powered kettlebell training program to build muscle and improve athletic performance.

The "team" ate nothing but natural whole foods (raw!) and ate A LOT of them—some participants ate up to 6000 calories per day.

The results?

One participant, a gentleman in his mid-thirties with an athletic background and some weight training experience, Stephen Nepa, gained 28lbs in 8 weeks!

Was it all muscle?

Of course not.

But 22lbs of it was.

Not bad at all.

I'll take that—how about you?

2. Eat A Lot of Protein. What's a lot of protein?

   A good rule of thumb is 1.0 to 1.5 times your bodyweight in pounds. For example: 185lbs trainee needs to eat 185 to 270 grams of protein per day.

3. Eat High Quality Sources of Protein. Right off the bat this eliminates soy. So if you are a vegetarian reading this, there may be no hope for you. Perhaps rice or some other source of protein. Focus on eggs, milk, cottage cheese, beef, turkey, chicken, and fish. Supplement with protein powders if you must.

4. Eat Carbohydrates. Yes, I said carbohydrates. In this carbo-phobic world, carbs still have their place. And that's in your stomach.

   Carbohydrates have been shown to be protein sparing, meaning, with adequate carbohydrate, your body won't use protein (read: muscle tissue) for energy.

   Carbohydrates help you grow. If you are afraid of them, Stop!

   Carbohydrates help trigger the powerful muscle-building hormone, insulin. You'll want to take advantage of this hormone if you want to build some appreciable muscle.

5. Eat High Quality Sources of Carbohydrate. This means carbohydrates that aren't man-made—potatoes, sweet potatoes, oats, brown and wild rice, quinoa, etc. These should be your first choices along with fruits and of course vegetables, lots of them.

6. Time Your Nutrients. Nutrient Timing is a relatively new idea that's been promoted in the past 5 years or so. Dr. John Berardi, PhD, is one of the most vocal advocates for this approach. It has worked very well for thousands of trainees and may also work well for you. (If you have a deep interest in the concept of Nutrient Timing, check out Dr.

Berardi's work at www.precisionnutrition.com.)

The basic theory is this: Your body always needs protein, so structure your diet around it. Your body also needs fat, so include high quality sources of it such as nuts and fish oils. However, your body processes fats better in the afternoon, based on your circadian rhythms.

So eat your fats combined with your proteins in the afternoons. Your body processes carbohydrates at two different times: first thing in the morning and around exercise. So, eat your carbohydrates first thing in the morning with your protein and right after your workouts.

7. Eat A Lot More. Did I mention this already? Of course I did. I just wanted to make sure I made my point and you were paying attention. Here's another simple way to get your calories, popularized by Randall Strossen, in his book, Super Squats: Drink a gallon of milk a day.

That's it.

Now when you choose to drink this gallon is up to you, but if it were me, I'd space it out: With meals, between meals, after meals. You get the picture. What type of milk? Stick with 1% or 2%.

These are the basics. There are of course many more guidelines, but these should get you to your destination.

For further interest on the topic of nutrition, I refer you to publications by the following group of highly qualified, highly distinguished individuals:

- Dr. John Berardi, PhD
- Dr. Lonnie Lowery, PhD
- Dr. Mauro Di Pasquale, MD
- Dr. Tom Bilella, DC
- Dr. Christopher Mohr, PhD, RD
- Dr. Jeffrey Volek, PhD
- Jordan Rubin

What Can You Expect From This Program?

Before we get into the meat and potatoes of the program design here, you should know what you are getting yourself into when you commit to using this program. (Notice the word "commit?" You can't piecemeal this program—pick and choose like a grocery store—it just won't work...)

- Expect each training session to feel like a "workout." Each session will be demanding—the last training session of each week will be the hardest and most demanding.

- Expect brief training sessions. Some literature to surface from the Eastern Bloc former Soviet-controlled countries indicate that the body's hormones, specifically testosterone, started to decrease after 45 minutes of exercise. Is this true? Honestly, I don't know. What I do know is that you cannot possibly work as hard as you need to in order to grow muscle for much longer than one hour. In fact, in my experience, my best results have been around that 45 minute mark. Do you agree? Does it matter? Why chance it? Not only that, after some of these training sessions, you'll send me a "thank you" card that they lasted "only" 45 minutes or less.

- Expect to be psychologically challenged. Fatigue accumulates very quickly, both locally and systemically during these training sessions. This comes from a build up of lactic acid. Your heart rate will soar and you will get out of breath very quickly. At certain points, you will question why you are doing what you are doing.

- Expect to be hungry. This training program will ramp up your metabolism leaving you almost ravenous. So make sure you EAT! You must do this in order to grow muscle. A good rule of thumb is you should never be hungry on this program—so chow down!

- Expect to be tired. You will only be training three days each week. However, this training program is extremely intensive (intensive: requiring exertion). You will need the other days to recover from your training sessions. So make sure you get lots of sleep—at least eight hours each night, and preferably a nap.

- Expect to be sore. This is part and parcel for any muscle-building program. It can be discouraging to a trainee who's not used to training for muscle and only training with strength. Don't worry—you'll get over it—the discouragement, that is.

- Expect to question your manhood or womanhood. This of course goes along with being mentally challenged. But at some point during this program, you will question the very nature of your being. This is normal. After this program not only will you be physically stronger, you will be mentally stronger.

- Expect your grip to almost fail. Because you will be holding onto your kettlebells for longer than you are used to, many times your grip will feel like it will fail. Don't worry. This is normal. After you are done with this program, one of your rewards will be a stronger grip.

- Expect incredibly high heart rates. Because your body will be working incredibly hard for a longer-than-you're-used-to period of time, and because no muscle will remain unused during any given exercise, your heart rate will skyrocket. This is natural, normal, and desirable. This produces lactic acid, a by-product of intense exercise. And by default, your body will release growth hormone, which aids not only in the muscle building process, but also in the fat-burning process.

- Expect to sleep well. This program is very demanding, even on the briefest of days. You need to sleep. Make sure you get at minimum eight hours per night. If you have trouble sleeping, you may want to consult your local Naturopathic Doctor for some natural sleep aids.

- Expect to use recovery methods. Because of the intensive nature of this program, you will need to employ recovery methods to maximize your gains. Pavel's, Fast and Loose, comes to mind. Suana, steamroom, and contrast showers are also extremely helpful in aiding recovery. Performing some form of joint mobility work or static stretching on your off days will also be helpful.

- But *Most Importantly*, Expect New Muscle Growth! If you are using the appropriate weights and following the guidelines laid out in this book, you will grow!

The Program Details

Now it's time to dive into the deep end of the pool. The following is a three-day a week program. Each training session will last between 15 and 45 minutes.

During the first 6 weeks of this program you will perform *Complexes*. If you choose to commit to a second 6 weeks, you will use *Both—the Chain will be included within the Complex.*

Use a pair of kettlebells for all exercises that you can comfortably press for ten reps.

Weeks 1-6: Complexes

Day 1, Medium

DHP x5
DSN x5
DMP x5
FSQ x5

WEEK #	1	2	3	4	5	6
SETS	4	5	6	5	6	7
REPS PER WORKOUT	80	100	120	100	120	140
REST (IN SECONDS)	120	120	120	90	90	90

Day 2, Light

DSW x5
DSN x5
SSP x5

WEEK #	1	2	3	4	5	6
SETS	4	5	6	5	6	7
REPS PER WORKOUT	60	75	90	75	90	105
REST (IN SECONDS)	90	90	90	75	75	75

Day 3, Heavy

DCL x5
DMP x5
FSQ x5
DPP x5
FSQ x5

WEEK #	1	2	3	4	5	6
SETS	3	4	5	4	5	6
REPS PER WORKOUT	75	100	125	100	125	150
REST (IN SECONDS)	120	120	120	90	90	90

So to recap, you will be performing three training sessions each week. That's it. No more. If you want more, then you're not following the program correctly. Use bigger kettlebells. Day One is a "Medium" day. Day Two is a "Light" day. And Day Three is a murderous "Heavy" day.

It goes without saying that you should put a day of rest in between each training session.

Here's how you should structure your week:

Monday: Medium Day

Tuesday: Off, Active Recovery

Wednesday: Light Day

Thursday: Off, Active Recovery

Friday: Heavy Day

Saturday: Off, Active Recovery

Sunday: Off

Weeks 7-12: Both Complexes & Chains

Day 1, Medium

DHP x5
(DCL + DMP) x5
DSN x5
FSQ x5

WEEK #	7	8	9	10	11	12
SETS	3	4	5	4	5	6
REPS PER WORKOUT	75	100	125	100	125	150
REST (IN SECONDS)	120	120	120	90	90	90

Day 2, Light

DHP x5
DSN x5
SSP x5

WEEK #	7	8	9	10	11	12
SETS	4	5	6	5	6	7
REPS PER WORKOUT	60	75	90	75	90	105
REST (IN SECONDS)	90	90	90	75	75	75

Day 3, Heavy

FSQ x5
DSN x5
DMP x5
(DCL + DPP) x5
FSQ x5

WEEK #	1	2	3	4	5	6
SETS	3	4	5	3	4	5
REPS PER WORKOUT	90	120	150	90	120	150
REST (IN SECONDS)	150	150	150	120	120	120

Once you have complete all 12 weeks, take off a full week to rest and recover. Do nothing but active recovery work: Go for walks. Stretch. Perform joint mobility work. Do anything out of the ordinary, but stay away from the kettlebells. Continue to eat as if you were still training. After your week off, pick another program, either for strength or size, but don't return to this type of program for at least three months.

That's the program. Nothing superfancy, just plain hard work followed up by some heavy-duty eating.

As Mark Reifkind, MRKC says, "Simple, but not easy."

FAQs:

Answers to "Can I...?" and "What if..." and the Timeless Classic, "Yeah, but..."

Inevitably, questions arise that you may or may not have thought of and often at the most inopportune times, like in the middle of a set. The following are helpful answers to questions you might have.

Q: What if I want to train for other things like strength along with this program?

A: Then you're not doing "this program." You're doing your own, and therefore, I can't tell you what your results will be. *Kettlebell Muscle: Maximum Muscle in Minimum Time* is designed to pack on muscle—a lot of muscle, in a short period of time. It's also designed for the trainee who doesn't want to spend all day in the gym.

Q: How come you don't include "variety days" like other programs?

A: Your variety should come in the form of the foods you eat. The reality is, this program is so hard and so demanding that you really shouldn't want to do anything other than eat and rest.

As mentioned earlier, you should plan on including some active recovery techniques. So on your "off" days, you can perform some static stretching, practice *Fast and Loose*, sit in the sauna, get a massage, even use a foam roller, if you're into that sort of masochism.

Q: What if I don't have two kettlebells the same size?

A: Buy a second one so you have a pair. Seriously, kettlebells are not *that* expensive. That's especially true when compared to alternative expenses, such as increased personal health care costs or wasted money on silly exercise equipment that gets stored under the bed. Look at purchasing a second kettlebell as making an investment in yourself and improving your time management skills—a way to free up your time so you can do the things you want to do.

If you find you just can't scrape together the dough, then use different-sized kettlebells. Rumor has it *uber*-strength coach and RKC team leader Dan John uses this method all the time. I think it's a great for double kettlebell drills, just not this particular program. You'll have more than enough to concentrate on without being distracted by the unique stabilization demands produced by this type of asymmetrical loading.

Q: I've been doing some reading on the Internet. Some other coaches and experts say that complexes are only good for burning fat and are a waste of time otherwise. What do you think?

A: Well, obviously, I think differently, since you just finished reading a book about building muscle using kettlebell compound lifts. But I'm glad to refer you to the work of Coach Istvan "Steve" Javorek, Romanian coach emeritus, who used complexes to transform (read *build muscle, burn fat*) the physiques of his weightlifters and other athletes in their respective off-seasons over the last 35 years.

By the way, he often used complexes before and after training sessions, not just as a workout by themselves!

Q: Do I have to do all 12 weeks of this program, or can I stop after 6 weeks?

A: The last time I checked, this was still a free country, my friend, so you can do whatever you want. If you want a break and are happy with the amount of muscle you've gained during the first six weeks, then the natural stopping point would be after Week 6. If you're not satisfied, then keep on going and finish the program as written.

Q: What if I can't (fill in the blank)?

A: Then you may have to put this program aside until you can. Plenty of great resources are available to help you do whatever it is you currently cannot do. Many of them are inexpensive; some are even free. In the meantime, if you must, the answer is the double swing.

Q: Yeah, but I'm special, and I've done complexes before. Can I...?

A: No offense, friend, but you're only special to your mother, who I'm sure loves you very much. You may have done complexes with dumbbells or a bar before, but I guarantee you that doing them with kettlebells is a whole 'nother animal. Start at the beginning. Follow the program. Trust me.

Weeks 1-6: Complexes						
Day 1, Medium						
DHPx5						
DSNx5						
DMPx5						
FSQx5						
Week #	1	2	3	4	5	6
Sets	4	5	6	5	6	7
Reps per Worko	80	100	120	100	120	140
Rest (in second	120	120	120	90	90	90
Day 2, Light						
DSWx5						
DSNx5						
SSPx5						
Week #	1	2	3	4	5	6
Sets	4	5	6	5	6	7
Reps per Worko	60	75	90	75	90	105
Rest (in second	90	90	90	75	75	75
Day 3, Heavy						
DCLx5						
DMPx5						
FSQx5						
DPPx5						
FSQx5						
Week #	1	2	3	4	5	6
Sets	3	4	5	4	5	6
Reps per Worko	75	100	125	100	125	150

Rest (in second	120	120	120	90	90	90
Mon: Medium						
Tue: Off, Active Recovery						
Wed: Light Day						
Thurs: Off, Active Recovery						
Fri: Heavy Day						
Sat: Off, Active Recovery						
Sun: Off						
Weeks 7-12: Complexes & Chains						
Day 1, Medium						
DHPx5						
(DCL+DMP)x5						
DSNx5						
FSQx5						
Week #	7	8	9	10	11	12
Sets	3	4	5	4	5	6
Reps per Worko	75	100	125	100	125	150
Rest (in second	120	120	120	90	90	90
Day 2, Light						
DHPx5						
DSNx5						
SSPx5						
Week #	7	8	9	10	11	12
Sets	4	5	6	5	6	7
Reps per Worko	60	75	90	75	90	105
Rest (in second	90	90	90	75	75	75
Day 3, Heavy						

FSQx5						
DSNx5						
DMPx5						
(DCL+DPP)x5						
FSQx5						
Week #	1	2	3	4	5	6
Sets	3	4	5	3	4	5
Reps per Worko	90	120	150	90	120	150
Rest (in second	150	150	150	120	120	120